AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

Retail Electricity Pricing Inquiry

Preliminary report

22 September 2017

Australian Competition and Consumer Commission
23 Marcus Clarke Street, Canberra, Australian Capital Territory, 2601

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Abbreviations

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACL	Australian Consumer Law
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASX	Australian Securities Exchange
CALC	Consumer Action Law Centre
CCA	Competition and Consumer Act
CET	Clean Energy Target
C&I	commercial and industrial
CME	Carbon + Energy Markets
COAG	Council of Australian Governments
CPI	consumer price index
CSIRO	Commonwealth Scientific and Industrial Research Organisation
current gas inquiry	the ACCC's current gas inquiry 2017-20
East coast gas inquiry	the ACCC inquiry into the competitiveness of the wholesale gas industry (held between 2015 and 2016)
EBITDA	earnings before interest, tax, depreciation and amortisation
EIS	Emissions Intensity Scheme
ESCOSA	Essential Services Commission of South Australia
ESC Victoria	Essential Services Commission Victoria
ESOO	AEMO Electricity Statement of Opportunities
Finkel Review	Independent Review into the Future Security of the National Electricity Market
GJ	gigajoule
GWh	gigawatt hour
ICRC	Independent Competition and Regulatory Commission
Inquiry	The ACCC's current inquiry into retail electricity pricing
IPART	Independent Pricing and Regulatory Tribunal
kWh	kilowatt hour
LGC	Large-scale generation certificates
LMR	limited merits review
LNG	liquefied natural gas
LRET	Large-scale Renewable Energy Target
MW	megawatt

MWh	megawatt hour
NEFR	AEMO National Electricity Forecasting Report
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NERL	National Energy Retail Law
NERR	National Energy Retail Rules
NSW	New South Wales
OECD	Organisation for Economic Co-operation and Development
Ofgem	Office of Gas and Electricity Markets (UK)
OTC	over-the-counter
OTTER	Office of the Tasmanian Economic Regulator
PJ	petajoule
PPA	power purchase agreement
PV	photovoltaic
QCA	Queensland Competition Authority
QCOSS	Queensland Council of Social Service
RAB	regulatory asset base
RET	renewable energy target
SACOME	South Australian Chamber of Mines and Energy
SME	small and medium enterprise
SRES	Small-scale Renewable Energy Scheme
STC	Small-scale Technology Certificates
SRMC	short run marginal cost
TCR	tariff comparison rate
TW	terawatt
TWh	terawatt hour
The data taskforce	Data Availability and Use Taskforce
The Tribunal	Australian Competition Tribunal
Victorian Review	Independent Review into the Electricity and Gas Retail Markets in Victoria

Executive summary

On 27 March 2017 the Treasurer, the Hon Scott Morrison MP, directed the Australian Competition and Consumer Commission (**ACCC**) to hold an inquiry into the retail supply of electricity and the competitiveness of retail electricity markets in the National Electricity Market (the **Inquiry**). The ACCC's terms of reference for the Inquiry (**appendix 1**) are broad, encompassing all levels of the supply chain.

The National Electricity Market (**NEM**) is the wholesale electricity market that covers Queensland, New South Wales (**NSW**), Victoria, South Australia, Tasmania and the Australian Capital Territory (**ACT**). As both Western Australia and the Northern Territory are not connected to the NEM they are not included in this Inquiry.

Over the past five months we have received information, documents and data from industry participants and a range of other interested parties, including consumers, businesses, representative groups and other government and non-government organisations. We have received over 150 submissions to our Issues Paper released in May and spoken directly with consumers and businesses at public forums in Adelaide, Brisbane, Melbourne, Sydney and Townsville.

One thing is clear from this consultation and information gathering: there is a severe electricity affordability problem across the NEM and the price increases over the past ten years are putting Australian businesses and consumers under unacceptable pressure.

Retail electricity prices have significantly increased in the past decade, and many households cannot absorb these increases. An increasing number of consumers are reporting difficulties meeting their electricity costs, and some consumers have been forced to minimise their spending on other essential services, including food and health services, to afford electricity bills.

Businesses across all sectors have faced even higher increases over the past 12 months, following renegotiation of long term contracts. Many of these businesses cannot pass the increased costs on and are considering reducing staff or relocating overseas. Some businesses have even been forced to close.

We have found that there is insufficient competition in the generation and retail markets, which both raises prices and increases barriers to entry. We have also found that retail price deregulation has benefited some and hurt others. The market is exceptionally complex, and consumers have no ability to exit the market.

This report outlines the ACCC's preliminary findings from the initial stage of the Inquiry. We have analysed each of the key components of a retail electricity bill to demonstrate what has driven price increases over the past decade. We have also looked closely at the operation of each level of the electricity supply chain, identifying issues around market structure and firm behaviour. A particular focus of our work to date has been to explore the operation of the retail electricity market to identify the key barriers that consumers face in accessing competitively priced electricity, including challenges in engaging with electricity retailers and choosing the electricity service that is best for them. This report concludes by setting out the ACCC's agenda for the remainder of the Inquiry.

Causes of retail electricity bill increases

The ACCC has conducted a detailed analysis, based on data provided by electricity retailers, to determine the drivers of electricity price increases over the past ten years. A key area of focus for the ACCC has been estimating retailers' profit margins, as other organisations that have sought to break down the components of a retail electricity bill have not had access to data on actual retailer costs.

Our preliminary findings are that, on average across the NEM, a 2015–16 residential bill was $1524 (excluding GST), and was made up of:

- network costs (48 per cent)
- wholesale costs (22 per cent)
- environmental costs (7 per cent)
- retail and other costs (16 per cent)
- retail margins (8 per cent).[1]

Between 2007–08 and 2015–16, increases in residential bills were primarily driven by higher network costs. Bill increases were also driven by, to a lesser extent, increasing retailer operating costs and by increasing environmental scheme costs. Some of the increase was also attributable to increases in retailer margins, although this varied significantly by state. Over this period, wholesale energy costs actually decreased in real terms.

In the period since July 2016, retail price increases were likely driven by higher wholesale prices. We estimate that higher wholesale costs during 2016–17 were likely to increase the average bill by a further $167.

Our analysis indicates that bills and prices have not increased at the same rates. In real terms, average residential bills increased by around 30 per cent (on a dollars per customer basis) between 2007–08 and 2015–16. Average residential prices (as measured by a cents per kilowatt hour (**kWh**) measure) have increased by 47 per cent during the same period. After considering wholesale price increases in 2016–17, the ACCC has estimated that average bills in dollars per customer terms would have increased by 44 per cent, while prices in cents per kWh would have increased by 63 per cent since 2007–08. These estimated cost increases were reflected in actual retailer price increases since December 2016.

The data demonstrates somewhat smaller increases in average bills than might be expected (for example when looking at the consumer price index (**CPI**) increases for electricity over the period). We attribute this to:

1. reductions in electricity usage, driven in part by take-up of rooftop solar photovoltaic (**PV**) systems
2. some consumers getting the benefit of shopping around for lower priced market offers which can be substantially cheaper than the most expensive offers
3. some public pricing data, for example CPI, being historically based on higher-priced standing offers.

The ACCC's findings in relation to retailers' costs and margins are detailed in **chapter 2**.

It is important to note that some data and documents requested from retailers were not provided to the ACCC until close to the finalisation of this report and some are yet to be

[1] Values do not sum to 100 per cent due to rounding.

received. We will continue to refine our analysis of costs and margins, along with undertaking work on what consumers and businesses are paying for electricity, throughout the remainder of the Inquiry.

How electricity markets are functioning

The wholesale (generation) market is highly concentrated and this is likely to be contributing to higher wholesale electricity prices. Large, baseload coal-fired generation has exited the market in recent times, for example Hazelwood in Victoria and Northern in South Australia, continuing a trend of consolidation and increased vertical integration in some wholesale markets over the past decade or so. This has resulted in gas powered generation becoming the marginal source of generation more frequently, particularly in Victoria and South Australia. The increased prominence of gas powered generation has coincided with shortages in domestic gas supply which have driven up prices. At the same time, the demand-supply balance for electricity has significantly tightened, making it difficult for standalone retailers to compete with vertically integrated 'gentailers' in most NEM regions.

While most retail markets across the NEM have more than 19 retailers operating, the 'big three' vertically integrated gentailers, AGL, Origin and EnergyAustralia, hold large retail market shares in most regions and control in excess of 60 per cent of generation capacity in NSW, South Australia and Victoria. In the case of generation, this share has been relatively stable over recent years. This market dominance has led to non-vertically integrated retailers having limited access to risk management products, and outcomes for consumers and businesses are being driven by pricing practices that are not consistent with vigorous competition.

While natural monopoly electricity networks are highly regulated, electricity network operators have been able to over-invest in poles and wires as a result of the network regulation framework. To a significant extent, decisions of the past relating to network investment are 'locked-in' and will burden electricity users for decades to come. Attention should now turn to what can be done to mitigate these effects, recognising that there are already signs that network prices are moderating, due to changes in the network regulation framework since 2013. The issues arising from the network regulation framework have been compounded by network operators successfully challenging regulatory decisions of the Australian Energy Regulator (**AER**), resulting in higher network charges to households and consumers. The ACCC welcomes the Australian Government's announcement that it will take steps to remove the limited merits review process, as this will help ensure network pricing is moderated in future.

Environmental or 'green' schemes, aimed at achieving sustainability objectives, have also increased costs and created cross-subsidies. Over the past decade, various state and territory-based environmental schemes have been introduced. For example in most NEM regions, early adopters of solar PV were offered generous feed-in tariffs of up to 60 cents per kWh. These have been of direct benefit to recipients of the feed-in tariff (solar PV customers) but the costs of the schemes have been passed through to all electricity users. The Queensland Government recently announced that it will fund the Queensland feed-in tariff scheme, the Solar Bonus Scheme, through its budget. This significantly reduced the recent price increases for Queensland electricity users. This move is welcomed by the ACCC and should see fewer cross-subsidies and lower overall costs to consumers and businesses.

The ACCC's findings in relation to the operation of each tier of the electricity supply chain are detailed in **chapter 3**.

Consumer experience

We have heard many concerns from consumers, consumer groups, businesses and retailers about the level of complexity that consumers face in engaging with the retail electricity market. Most consumers have many offers to choose from, and there is a significant degree of price dispersion, with hundreds of dollars difference between the highest and lowest retail offers in most NEM regions. However, many consumers find it difficult to understand and compare all of these offers.

The practice of discounting is particularly problematic. The vast majority of retailers offer discounts, either off the total bill or electricity usage only, but these discounts are not taken from a consistent reference point across retailers, making it difficult to determine which offer is best. Retailers also use inconsistent terminology to describe the same terms, which increases confusion.

There are many signs of competition in most NEM regions—there are a number of electricity retailers operating and relatively high rates of switching. However, other indicators, such as low levels of innovation in relation to the underlying offer structures and increasing retail costs and margins, suggest competition is not driving good outcomes for consumers. In addition, a significant number of consumers (although declining over time) are on standing offers, which are generally higher priced than market offers.

There is also a lack of awareness of the tools available to assist consumers to engage with the retail electricity market, in particular the government-run price comparator websites (the AER's Energy Made Easy website and the Victorian Government's Victorian Energy Compare). Many consumers are also unaware of the options available to them to seek assistance if they are struggling to manage their bills or to seek resolution of disputes with retailers.

The ACCC has also identified examples of retailers operating in ways that appear to be designed to circumvent existing regulation and examples of unintended consequences of regulation. For example, retailers' use of 'pay on time' discounting appears to have increased significantly after prohibitions or caps were placed on late payment fees. Retailers also appear to have moved to offering ongoing contracts with fixed benefit periods in response to regulatory obligations that apply at the end of fixed term contract periods.

The ACCC's findings in relation to the barriers to consumers engaging with the retail electricity market are detailed in **chapter 4**.

In considering possible recommendations in the next phase of the Inquiry, the ACCC will be mindful of the history of interventions in this market which have too often had unintended consequences to the detriment of electricity users. For this reason, policies targeting improvements in this market will need to be carefully considered prior to implementation.

Next steps

The ACCC has collected a large amount of information so far during the Inquiry. While we have made preliminary findings, there is a large amount of analysis still to take place before the ACCC's final report to government in June 2018.

Chapter 5 details the ACCC's agenda for the remainder of the Inquiry. The ACCC will focus on determining the key drivers of the energy affordability problem and barriers to consumers engaging with the market, and delivering clear findings and recommendations to governments to assist in resolving these issues.

The ACCC is accepting submissions in response to this preliminary report. Submissions should focus on the issues raised in this preliminary report and other issues relevant to the terms of reference, but need not repeat material already submitted to the ACCC. Submissions in response to this report are due by 17 November 2017. We also welcome the opportunity to speak directly with interested parties, by telephone, videoconference or in person where this can be arranged. Further detail on the process for making a submission is in **chapter 6**.

The ACCC will also be seeking additional information from a range of parties. This will include the use of the ACCC's power to compel information under section 95ZK of the *Competition and Consumer Act 2010* (**CCA**). The ACCC also expects to hold hearings where witnesses will be required to provide evidence to the ACCC.

1. Australia's electricity affordability problem

Key Points

- Based on CPI, retail electricity prices have increased by 80 to 90 per cent (in real terms) in the past decade when taking into account estimated price rises in July 2017.
- These large increases in electricity prices have not been matched by price increases in other areas of the economy, nor in wage growth.
- Those on low incomes are finding it increasingly difficult to absorb electricity price increases and are often limited in what they can do to reduce their energy costs.
- Electricity prices for businesses are also increasing rapidly and recent increases in wholesale prices are driving small and large business to reduce costs through investments in energy efficiency or distributed generation (solar PV), or reducing other costs across their business including wages.
- The international competitiveness of Australian manufacturers has been diminished over the past decade due to electricity price increases.

This chapter covers recent trends in retail electricity pricing across the economy, including:

- recent trends in electricity use and demand
- residential price trends and impacts relative to other household expenditure
- small, medium and large business electricity price trends
- the market experience for medium to large businesses including contracting and collective buying
- international competitiveness of retail electricity prices over time.

Detailed information around retail pricing and markets for residential customers, and specific impacts on vulnerable customers is covered in further detail in chapter 4.

1.1. Electricity consumption across the economy

Electricity is an essential service for Australian households and businesses. It is critical to lighting, heating, cooling and powering essential parts of modern living and business operations.

As shown in Figure 1.1 below, overall demand for electricity increased steadily until around 2009, then decreased by around 8 per cent between 2009–10 and 2013–14. While demand then rose marginally until 2016–17, it is expected to remain stable for the next 20 years despite projected population growth.[2]

The residential, commercial and industrial sectors together represent over 90 per cent of total electricity consumption across Australia. The remaining 10 per cent is the transport and energy sectors.[3] Residential energy users consume around 31 per cent of electricity generated in Australia.[4]

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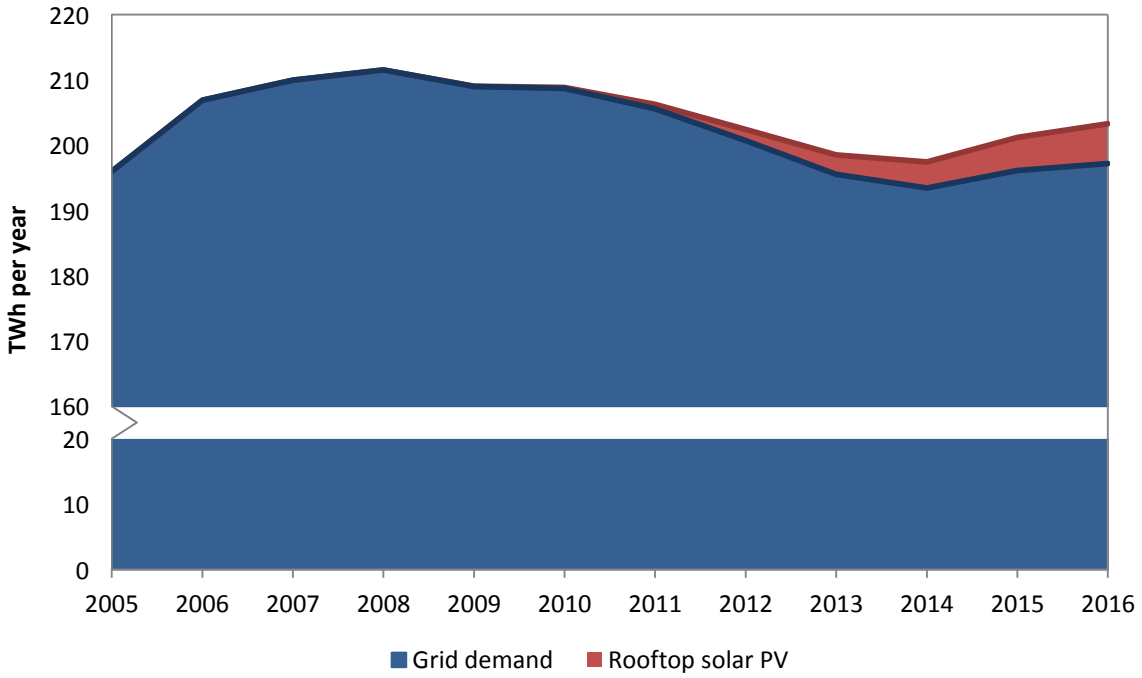
[2] Australian Energy Market Operator (**AEMO**), *National Electricity Forecasting Report: the National Electricity Market*, June 2016, p. 3.

[3] Department of the Environment and Energy, *Australian energy statistics*, Canberra, September 2017, Table F.

[4] Ibid.

Australian users are more reliant on electricity than they have ever been before, with households and businesses using more and larger appliances as a result of the increased role of technology in our everyday lives, including air conditioners, white goods and televisions.[5] However, energy efficient appliances and solar PV technology have offset some of this increased demand.[6] In 2016, solar PV output met around 3 per cent of electricity consumption.[7] Price increases may also play a role in reduced demand as households change usage patterns or invest in more efficient technologies.

Figure 1.1: Total electricity demand in the NEM 2005–2016



Source: AER, State of the energy market, May 2017, p. 22

While electricity is essential to all facets of Australian life and industry, affordability has not always been a strong focus of energy policy development. Over the past decade successive Australian and state governments have failed to balance competing priorities of security and reliability, universal access to affordable energy services, and reduced emissions, often making decisions with limited regard to the impacts of those decisions on the overall affordability of electricity. These government decisions, combined with other regulatory and business decisions, have led to higher prices for all electricity users. The effects of these decisions are detailed in chapters 2 and 3.

This was not always the case. Reforms flowing from the National Competition Policy saw privatisations of electricity assets, the formation of the NEM and gradual opening of markets to retail contestability. The goal of these reforms was to drive efficiency through competition in the contestable wholesale and retail components of the market and to ensure economically efficient operation of the natural monopoly electricity networks.

For some time after the NEM was established, markets appeared to be working effectively with new investment in generation and, in 2014, the AER generally found that Victorian and South Australian electricity distribution businesses, both of which had been privatised were

5 AEMO, June 2016, p. 7.

6 Ibid.

7 AER, State of the energy market, May 2017, p. 36.

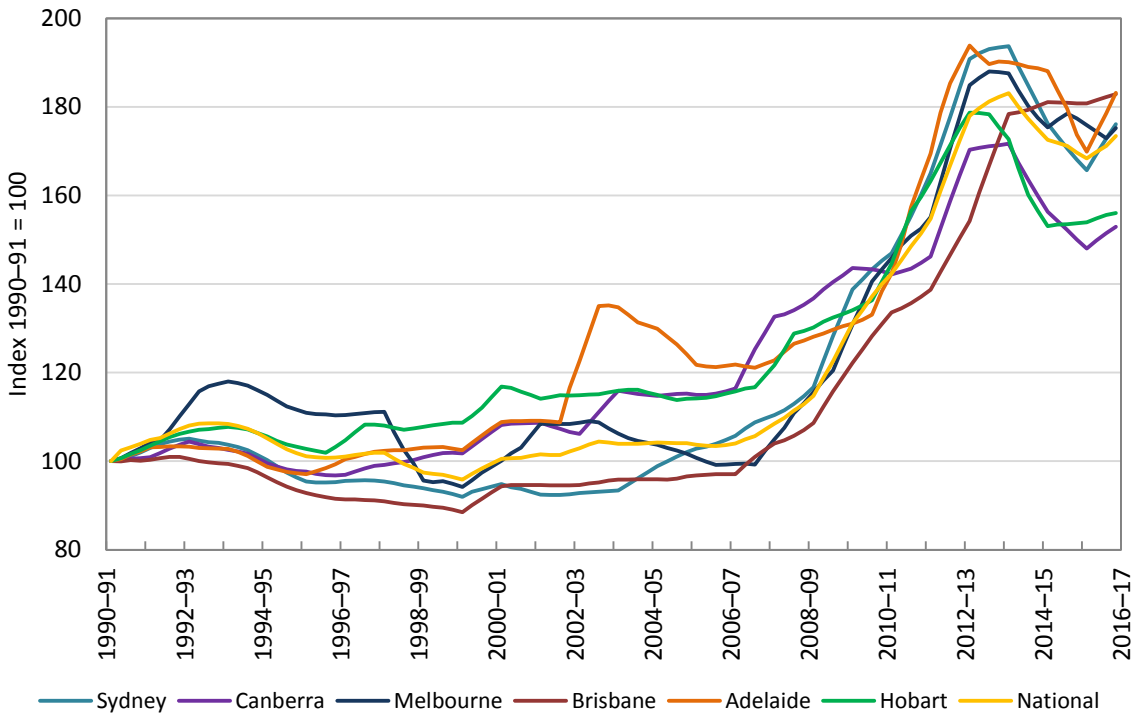
more efficient than other distribution businesses[8] that remained under state ownership. In the early stages of retail contestability, in markets such as Victoria, there were signs that retail competition was developing and that over time, an increasing number of consumers would be the beneficiaries of competitive pricing and greater choice of services and new technologies.

However, it is clear now that many of the policy, regulatory and business decisions over the past decade or more have, on balance, led to higher prices for all consumers.

1.2. Residential and small business users

According to CPI, prices faced by many small electricity users in the NEM (households and most small businesses) have risen between 80 and 90 per cent (in real terms) in the past ten years, when taking into account price rises announced in July 2017.[9] As Figure 1.2 shows, prices were reasonably stable between 1990–91 and 2007–08 but have increased dramatically over the past ten years. The drivers of these price increases are discussed in further detail in chapter 3.

Figure 1.2: Retail price index (inflation adjusted) – Australian capital cities



Note: Consumer price index electricity series, deflated by the consumer price index for all groups.
Source: ABS, Consumer Price Index 6401.0, Australia.

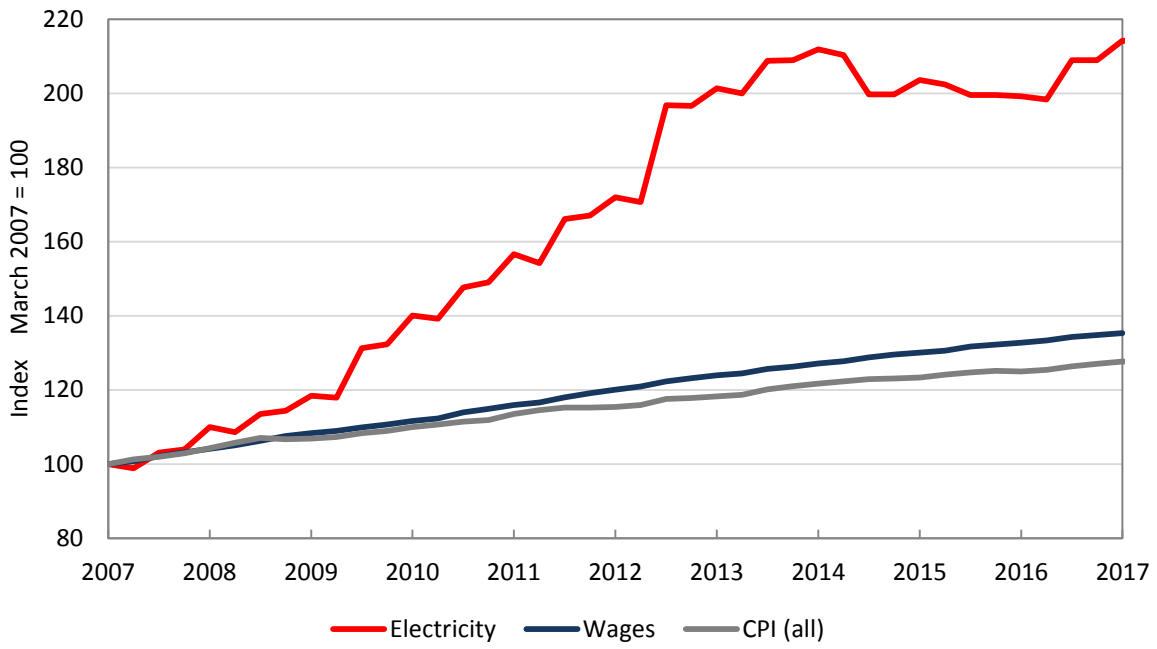
These large increases in electricity prices have not been matched by increases in prices in other areas of the economy, nor in wage growth. Figure 1.3 below indicates that between 2007 and 2017, electricity prices had a compound annual growth rate of 8 per cent which was more than twice that for wages (3.1 per cent) and CPI (2.4 per cent).[10]

8 AER, *Electricity distribution network service providers, Annual benchmarking report*, 2014, p. 6.

9 ACCC calculations based on the Australian Bureau of Statistics (**ABS**) CPI Cat 6401.0 and adjusted for inflation.

10 ABS, Consumer Price Index 6401.0; ABS, Wages Price index 6345.0, Australia.

Figure 1.3: CPI for electricity compared with other sectors and wage growth



Source: ABS, Consumer Price Index 6401.0 and ABS, Wages Price index 6345.0, Australia.

Recent price increases announced by retailers are expected to further reduce the affordability of electricity for customers. Section 1.2.1 below explores the recent price increases in each NEM region, and the impact that this is having on consumers.

1.2.1. Impact of electricity price increases on residential users

The ACCC has received a number of submissions from Australian households related to the sharp increase in electricity prices and its impact on them. Choice's Pulse Surveys have found that electricity prices are the number one household cost concern for Australians for nine straight quarters.[11] These cost of living concerns were borne out in submissions to the Inquiry and statements at public forums.

In 2017 households on standing offers faced further price increases (see Table 1.1 below). For low income or vulnerable households, meeting increases in electricity costs can mean reducing expenditure on other basics like food, children's educational needs or healthcare, or deferring household repairs or basic transport costs.[12]

[11] See for example, Choice, *Consumer pulse: Australians' attitudes to cost of living 2015–16*, July 2016, p. 3.

[12] Victorian Council of Social Service, *Power struggles: Everyday battles to stay connected*, August 2017 p. 34.

Table 1.1: Average increases in household standing offer electricity rates 2016 to 2017 (flat rate tariffs)

	Average Usage[13]	Standing offer price increase[14]	Change in $
ACT	8000 kWh	19–21%	$320–350
NSW*	7200 kWh	15–20%	$325–$450
Victoria*	4800 kWh	5–10%	$150–181
Queensland	8000 kWh	4%	$115
South Australia	6000 kWh	16–19%	$400–510
Tasmania	8550 kWh	2%	$38[15]

Source: 2017 St Vincent De Paul Tariff Trackers for the ACT, SA, QLD, NSW, Victoria and Aurora and the Office of the Tasmanian Economic Regulator for Tasmania[16]
* Price increase vary depending on the distribution network area.

In relation to market offers, it is difficult to determine an average price movement across the NEM, due to the significant number of market offers and the fact that market offer prices can change at any time. However, the St Vincent de Paul Society's analysis of market offers between July 2016 and July 2017 on the AER's Energy Made Easy website shows that the average rates of increase in market offers, in some states, were generally in line with the rates seen across standing offers.[17] This has not always been the case. Retail price analysis undertaken as part of the Independent Review into the Electricity and Gas Retail Markets in Victoria (the **Victorian Review**) found that standing offers in recent years increased markedly compared to the cost of supply.[18] The issues of price dispersion between market and standing offers, and retailer market strategies, are detailed in chapters 3 and 4 below.

The ACCC particularly notes the burden of higher electricity prices disproportionally affects those segments of society least able to afford it. As an example, in most NEM areas in 2016, the proportion of household disposal income spent on electricity was around five times greater for the lowest income quintile as it was for the highest income quintile (see Figure 1.4 below).

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13 All usage except Tasmania is based on the estimated usage for a four person household (medium size residential household) as detailed in each St Vincent De Paul tariff tracker report see references below.

ACT: this is the average usage for an all-electric household, the increase for electricity would reduce in a dual fuel household

Victoria: electricity usage is lower due to gas usage meeting a portion of their energy needs

South Australia: this is the average for a dual fuel household in South Australia

Tasmania: this is based on a medium residential user.

14 Estimated price increases based on standing offers between July 2016 and July 2017, excepting Victorian prices as they came into effect on January 2017.

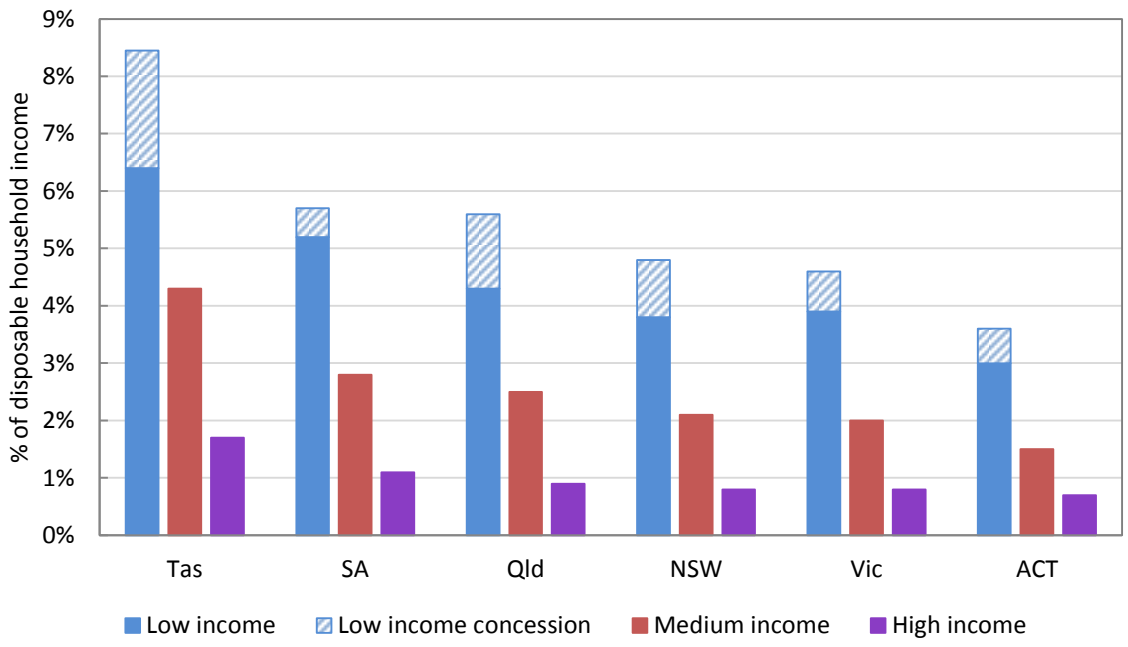
15 OTTER, *Standing offer electricity prices and the regulated feed in tariff rate to apply from 1 July 2017*, Media Release, 23 June 2017.

16 Sources: St Vincent De Paul, *ACT Energy Prices: An update report on the ACT Tariff Tracker Project, July 2017,* p. 5. St Vincent De Paul, *NSW Energy Prices: An update report on the NSW Tariff Tracker Project, July 2017,* p. 5. St Vincent De Paul, *Victorian Energy Prices: An update report on the Victorian Tariff Tracker Project, January 2017,* p. 5. St Vincent De Paul, *Queensland Energy Prices: An update report on the Queensland Tariff Tracker Project, July 2017,* pp. 5, 16. St Vincent De Paul, *South Australian Energy Prices: An update report on the South Australian Tariff Tracker Project, July 2017,* p. 5. Aurora Energy, *Pricing proposal period 2 of the 2016 standing offer price determination: 1 July 2017–30 June 2018*, p. 3.

17 The St Vincent De Paul Society's 1 July 2017 NSW and Queensland Tariff Tracker Project updates note a 16-19 and 6.3 per cent increase respectively in market offers, which is slightly higher than the average standing offer increases recorded (p. 5).

18 Thwaites, T, Faulkner, P and Mulder, T, *Independent Review into the electricity and gas markets in Victoria*, Victorian Government, Melbourne, August 2017, p. 10.

Figure 1.4: Median market offer as a proportion of household income in 2016



Source: ACCC/AER analysis, ABS Survey of Income and Housing (catalogue 6553.0), ABS Consumer Price Index (catalogue 6401), ABS Wage Price Index (catalogue 6345).[19]

This situation has worsened over time. Taking NSW as an example, in 2006–07, the bill (which reflected the regulated price at that time) as a proportion of household income was between 3 and 4.1 per cent for low income earners and between 0.6 and 0.8 per cent for high income earners (depending on the distribution zone).[20] In 2016, the median market offer as a proportion of household income was 4.8 per cent and 0.8 percent for low and high earners respectively.

According to market research, 20 per cent of residential customers are considered a high risk of experiencing some difficulty in meeting their energy costs.[21] The NSW Energy and Water Ombudsman noted increases in average levels of electricity related debt, enrolment in payment plans, and disconnection for non-payment.[22] Additionally, the Victorian Energy and Water Ombudsman has recently raised concerns in the media about the rising number of instances of high levels of debt for combined energy services with common debt levels amounting to $5000 for households in arears.[23] However, there are some indications of an easing of disconnection rates in 2015–16 which may reflect changes to retailer management of bad debt and higher enrolment in payment plans.

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19 These figures were prepared based on the AER's approach to estimating annual energy bills and household income as detailed in AER, *Annual report on performance of the retail energy market 2015–16*, November 2016, p. 91. Low income households are based on an adjusted lowest income quintile, mid income households are represented by the third income quintile, and high income by the fifth income quintile from the ABS Survey of Income and Housing 2013-14. edian offers are based on median flat rate tariff market offers (including electricity only discounts) excepting in Tasmania where the price is the standing offer. Consumption is reflective of AER bill benchmarks consumption rates by ABS household size, with low income households based on between 1.2–1.5 person sized households, and medium to high income households on 2-3 person households

20 ACCC calculations based on IPART figures (IPART, *Promoting retail competition and investment in the NSW electricity industry: regulated electricity retail tariffs and charges for small customers 2007 to 2010*, NSW Government, Sydney, June 2007, pp. 123-124). Referenced prices include GST but do not include state based energy concessions from the time.

21 Calculated by combining low income and mid-income vulnerable household segments in Newgate Research, *Understanding vulnerable customer experiences and needs*. June 2016, p.17.

22 Energy & Water Ombudsman NSW, *Submission to ACCC Issues Paper*, June 2017, p. 9.

23 Rooney, K, *Energy bill: households crippled by utility debts as high as $18,000*, Herald Sun, 2 September 2017.

The ability of a household to absorb the electricity price increases of the past decade varies on income. It will also vary according to the household's reliance on electricity compared to other energy sources such as gas,[24] its ability to invest in solar or energy efficient appliances, or to make behavioural changes to reduce use, and its overall bundle of other living costs. Further detail on the issues that vulnerable consumers face in engaging with the retail electricity market is in chapter 4 below.

1.2.2. Impact of electricity price increases on small business users

There are approximately 1.1 million small to medium enterprise (**SME**) electricity customers across Australia.[25] Depending on the business type, their energy needs might be similar to a household's or they could consume enough electricity to be classed as a 'medium user'.

To date, there has been limited information published in relation to prices paid by small businesses with relatively low levels of energy use. The experience and prices paid by small businesses that fall into the definition of 'small customers'[26] are generally in line with residential customers, but small businesses do not receive all the consumer protections under the National Energy Retail Law (**NERL**), for example hardship policies or access to Ombudsmen schemes. The experience of medium and large users is detailed in section 1.3 below.

According to a report prepared for Energy Consumers Australia by Alviss Consulting, a typical annual electricity bill for a SME ranges between $9,500 in Victoria to $15,900 in South Australia.[27] Nationally, the average electricity bill for SMEs using 40,000 kWh per year and paying the same rate all day (a single rate) has increased by 16 per cent since April 2016.[28] Figure 1.5 below shows Alviss Consulting's analysis of increases in small business bills from April 2016 to July 2017 by network.

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24 The use of gas for heating, hot water and cooking varies across states. Tasmania and Queensland are almost completely reliant on electricity for all domestic energy needs, whereas Victorian, South Australian and NSW household energy needs are met with a combination of electricity and gas services. In states with a high reliance on gas for basic household functions, that can represent an additional 5.2 per cent of household income (over and above that income expended on electricity) (AER, *Annual report on performance in the retail energy market 2015–16*. December 2016, p. 51.)

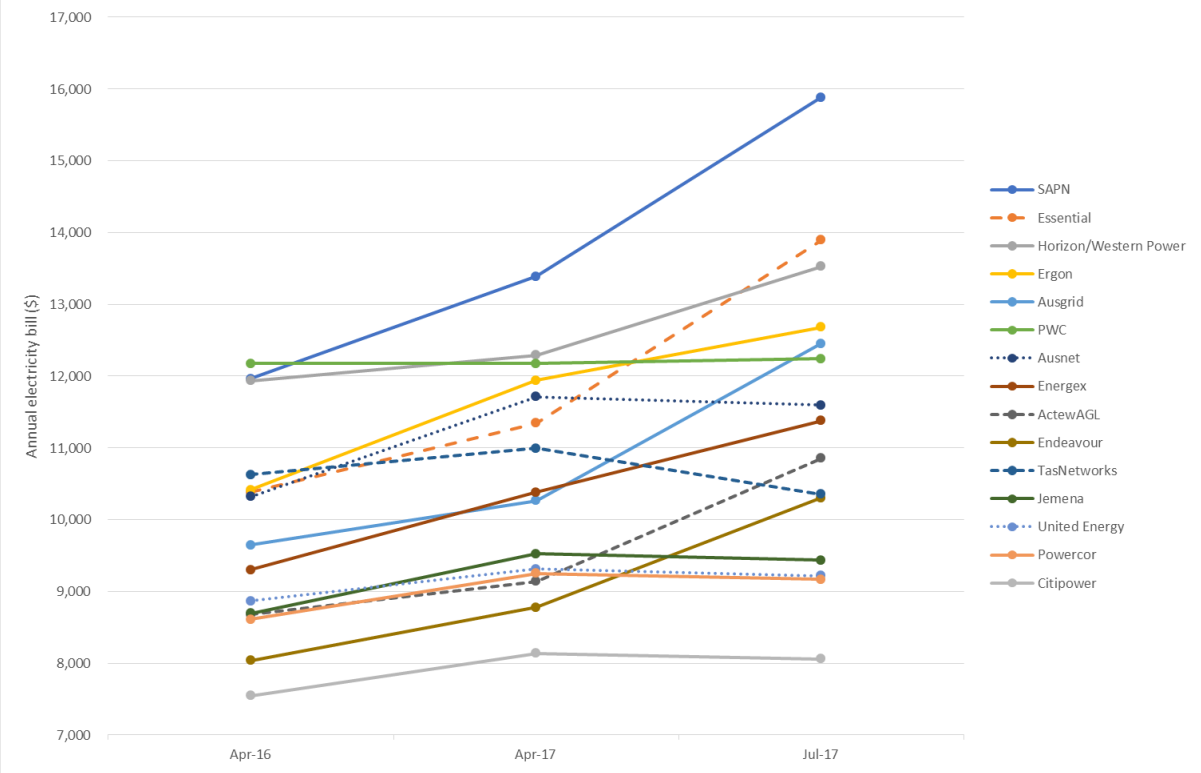
25 Alviss Consulting, *Small to Medium Enterprise Retail Energy Tariff Tracker*, Energy Consumers Australia, forthcoming, p. 11.

26 The NERL defines a small customer as all residential customers and business customers that consume less than 100 megawatt hours (MWh) per year, as per the National Energy Retail Law (South Australia) Act 2011 (South Australia), s. 5 and National Energy Retail Regulations (South Australia), s. 7. Some jurisdictions have a consumption limit for a business customer that differs to the NERL: 40 MWh Victoria, 150 MWh Tasmania, and 160 MWh in South Australia, all other states are 100 MWh.

27 Alviss Consulting, forthcoming, p. 5.

28 Ibid. The calculations are based on average market offer (including guaranteed discounts and pay on time discounts), based on the major retailers' offers, in each network area. For areas without market offers (regional Queensland and Tasmania) the bills are based on the regulated/standing offer. Usage is based on an assumption of average usage nationally but these levels are not verified and Alviss Consulting notes that they may change consumption levels in future to reflect more accurate levels of usage, including adding small, medium and large profiles.

Figure 1.5: Small business retail bills by network (average)[29]



Source: Alviss Consulting (forthcoming)

1.3. Commercial and industrial users

Medium and large users, or commercial and industrial (**C&I**) customers, are the largest electricity consumer group. Industry accounts for 34 per cent of total electricity consumption and large users, including aluminium production, account for almost half of this.[30] The commercial sector accounts for 26 per cent of total electricity consumption.[31] The commercial sector includes a wide range of businesses including financial services, commercial building services, construction and retail services, as well as public services and agriculture. The majority of C&I users obtain their supply from a retailer.

The doubling of wholesale prices in the past 12 months across the NEM has seen significant increases in the prices offered to C&I users. While there are some measures medium and large users can take to reduce the price they pay, including the use of energy management systems and load reduction, energy brokers and other intermediaries, these steps have not buffered businesses from the dramatic price increases in the wholesale electricity market.

29 Alviss Consulting, forthcoming.

30 Department of the Environment and Energy, September 2017, Table F.

31 Ibid.

Submissions from businesses confirm that in the past 12-24 months they have seen increases, in some cases a doubling or tripling, against their most recent electricity offer. According to the Australian Industry Group this may be because businesses are coming off long running (3-5 year) contracts when wholesale prices were suppressed by higher levels of supply, decreasing demand, and the removal of the carbon price.[32]

The ACCC has heard numerous examples of businesses struggling as a result of recent price increases. Sections 1.3.1 and 1.3.2 below include a number of case studies. However, these are only a small number of the stories that we have heard and the ACCC recognises that price increases are being felt by businesses of all sizes across all industries.

1.3.1. Price increases facing commercial (medium) users

Electricity prices for medium users are not publicly reported and generally reflect a complex, tailored agreement taking into account the energy demand profile of the business, and any other conditions in the retail contract, including demand curtailment at peak periods or direct load control.

The Australian Chamber of Commerce and Industry noted in its submission that it has received examples from small to medium businesses that reflected a doubling in electricity costs for those customers.[33] Likewise, the Australian Industry Group highlighted businesses with constant operations and relatively flat loads were seeing new average prices in 2017–18 of around 10 cents per kWh higher than in their previous contract, or a nearly threefold increase.[34] A number of submissions indicated that increased electricity prices were raising businesses' costs which must be passed through to consumers in the form of higher prices for domestic goods and services. These price rises are resulting in changes to output, reduction in other costs or even closure.[35] Members of the grocery sector have reported that there is limited ability to increase retail prices to recoup increased electricity costs and that wage costs are the only variable cost that can be reduced. Master Grocers Australia has estimated that they will need to shed approximately 2,200 jobs in response to electricity price increases.

Other medium users, particularly those with limited ability to reduce their energy loads during peak periods, also commented on the impact of high wholesale prices on the back of previous increases in network costs over the past decade.

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32 Australian Industry Group, Mind *the Gap: why businesses are seeing such large energy price increases*, blog post, 26 July 2017.

33 Australian Chamber of Commerce and Industry, *Submission to ACCC Issues Paper*, June 2017, p. 5.

34 Australian Industry Group, 26 July 2017.

35 See for example, Queensland Chamber of Commerce and Industry *Submission to ACCC Issues Paper*, July 2017, p. 1; Major Energy Users Inc, *Submission to ACCC Issues Paper*, July 2017, p. 6.

Box 1.1: Price increase case studies

A medium sized retail grocer reported to the Inquiry an increase of nearly $50,000 in its annual bill, equating to a 52 per cent increase in energy costs. The electricity price increase was partly mitigated by investing $900,000 in energy efficient refrigeration and purchasing through a large buying group, which if not done could have seen much higher increases to that business.

A retail grocer with multiple sites noted a 53 per cent increase in their total bill for July 2017, when compared to July 2016, equating to $36,000. This is expected to result in an increase in total electricity prices for all sites for the year of at least $400,000. This increase was partly offset by installing LED lighting conversion efficiency measures in most stores, which was estimated to provide $45,000 in reduced electricity costs per year. The owner is currently considering installing energy efficiency measures in the last store to reduce electricity costs for that location by $2,000 per month, however, replacing lighting is estimated to require around $53,000 of investment (half of which will be covered by government rebates).

A print and signage company in Queensland with variable usage has, on average, decreased usage from 45,000 kWh to 35,000 kWh but has seen their electricity costs increase from around $7,500 to $11,000 per month between 2009–10 and 2016–17. This is an increase in the cost per unit of electricity of almost 90 per cent.[36] Other companies in the printing industry have seen increases of 35–48 per cent in the past 12 months. Price changes reported across the printing industry are highly variable depending on size and location of the business, but all reported that these cost increases required operational or plant improvements, either cutting staff or installing large scale distributed generation systems.[37]

A large winery in South Australia reported that it had previously invested nearly $400,000 in energy efficiency improvements and solar power that reduced costs by around $120,000 per year. Following this, the winery was faced with an increase in electricity costs of 160 per cent in one year amounting to $250,000.[38] This price increase will increase the costs and this could in turn reduce the international competitiveness of that producer's exports.

Shopping Centres Australasia (SCA Property Group), which is responsible for operating 72 neighbourhood and regional shopping centres across the NEM estimated it faced a 31 per cent or $1.8 million spike in electricity costs. The group indicated it would recover around $1.2 million of the increase from tenants including major retailers like Woolworths.[39] This increase in costs will have to be passed through to end customers where possible and will reduce the competiveness of those businesses. In addition to renegotiating contracts, SCA Property Group indicated it will invest around $1 million in new energy saving measures including installing energy efficient products as well as solar PV to reduce dependence on grid supplied electricity.[40]

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36 Printing Industries Association of Australia, *Submission to ACCC Issues Paper*, July 2017, pp. 5, 21.

37 Ibid, p. 16.

38 South Australian Wine Industry Association, *Submission to ACCC Issues Paper*, July 2017, p. 4.

39 Cranston, M, *Woolworths landlord to take a hit on rising electricity prices*, Australian Financial Review, 8 August 2017.

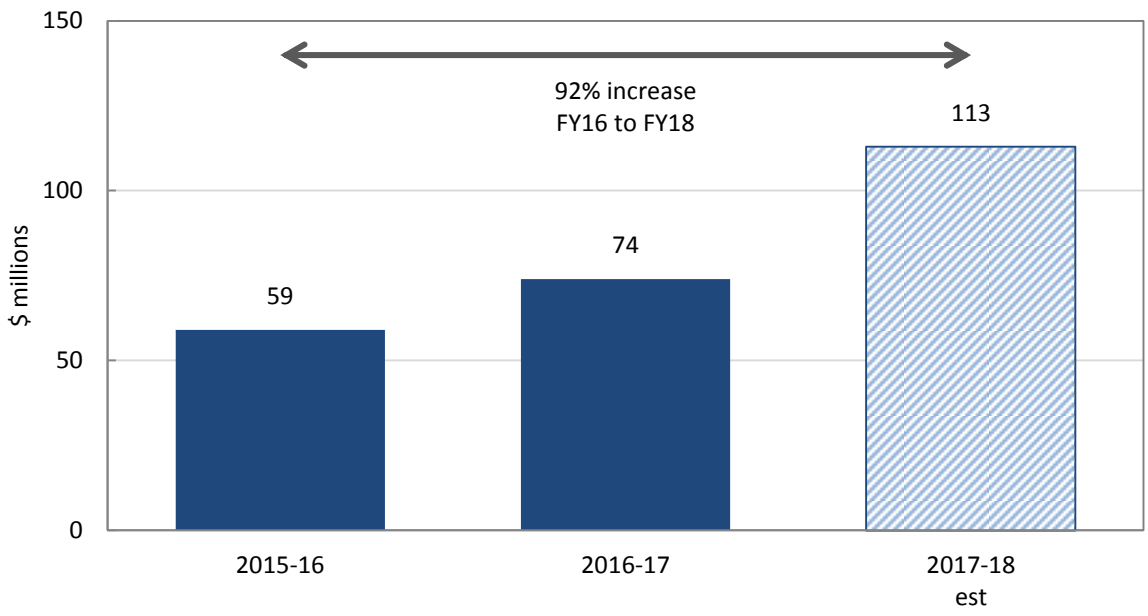
40 Ibid.

1.3.2. Price increases facing commercial (large) users

The largest users of electricity are predominantly industrial users.[41] Some of these users have reported they are experiencing reductions in their international competitiveness as a result of rising electricity costs. Many of these businesses already employ sophisticated energy management systems and have experience purchasing electricity directly from the wholesale market.

BlueScope Steel is the third largest manufacturer of painted and coated steel products globally,[42] with 41 per cent of its production based in Australia in 2017.[43] While BlueScope Steel has achieved over $300 million in cost savings across its Australian steel operations,[44] it has also seen a near doubling of its electricity costs in Australia since 2016.[45]

Figure 1.6: BlueScope steel's electricity and gas costs 2016–2018[46]



Source: Based on information in BlueScope, FY2017 Financial Results Presentation

Other industrial processes also require significant electricity or direct heat as a part of their operations. Visy Industries is a leading packaging and resource recovery company operating across Australia, as well as internationally. It has been reported that since 2011, Visy Industries has invested $500 million in clean energy including a 30 megawatt (**MW**) plant at its paper mill in Tumut.[47] Visy Industries has also committed to expand its in-house renewable energy generation alongside its increases to production and recycling facilities totalling $2 billion between now and 2027. While other large businesses are exploring similar options for installed generation, not all industries are similarly positioned to employ renewable generation.

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41 Each year, a very large industrial customer uses an amount of electricity equivalent to that of approximately 10,000 residential customers (Department of the Environment and Energy, *Energy Exchange: Energy Efficiency Opportunities program, Australian Government,* viewed 8 September 2017, https://www.eex.gov.au/large-energy-users/energy-management/energy-efficiency-opportunities).

42 BlueScope Steel, *About us*, viewed 20 September 2017, https://www.bluescope.com/about-us/.

43 BlueScope Steel, *FY2017 Financial Results Presentation*, 21 August 2017, p. 20.

44 Ibid, p. 7.

45 Ibid, p. 12.

46 Ibid.

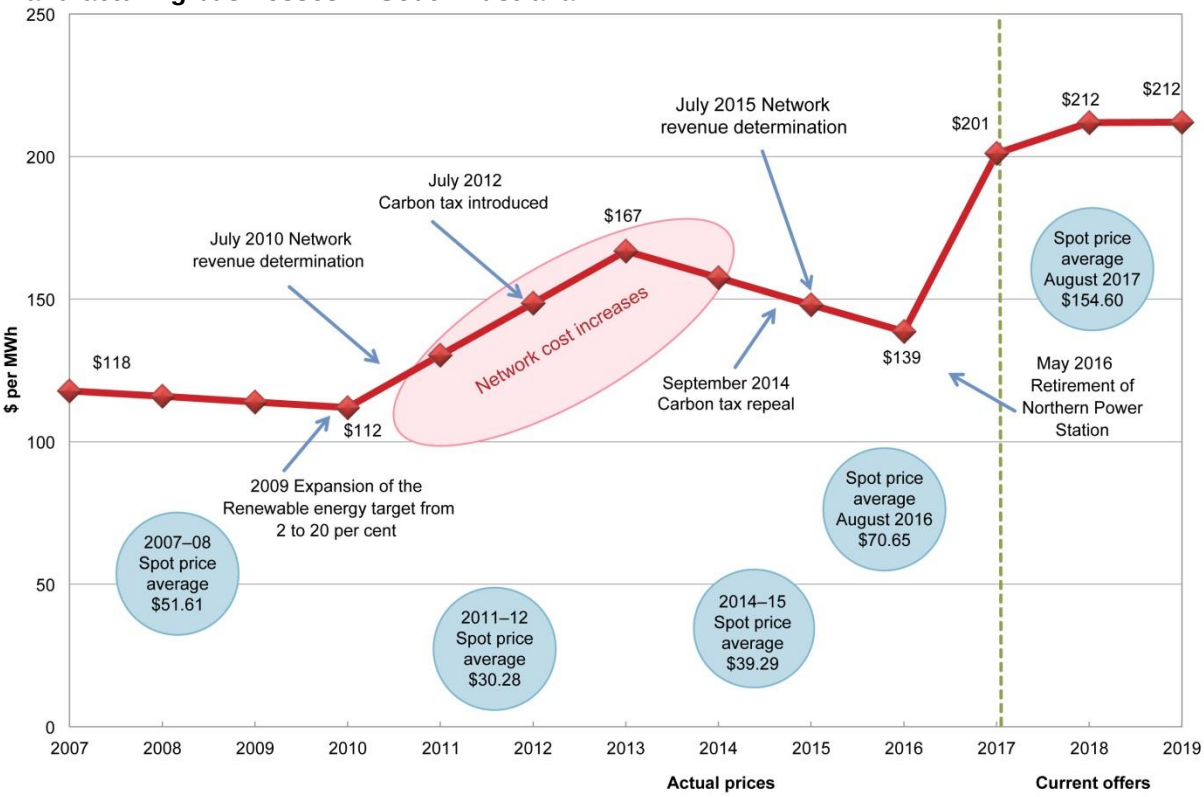
47 Crowe, D, *PM to mill job message in the bush*, The Australian, 23 August 2017; Stensholt, J, *Anthony Pratt's Visy hails $2b Australian expansion as it talks with Amazon*, Australian Financial Review, 23 August 2017.

Increases in network costs and wholesale electricity prices have resulted in a doubling of prices between 2007–2017 for a number of medium manufacturers in South Australia. Figure 1.7 below tracks the average total per megawatt hour (**MWh**) cost of electricity for three large scale manufacturers in South Australia against major market and policy developments. As seen below the average prices offered to these manufacturers is likely to reflect:

- increases driven by network cost increases of 9.5 per cent per year (in nominal terms) between 2010 and 2015,[48] the introduction of premium solar feed-in tariff schemes, and the introduction of the carbon price
- decreases between 2014–2016 due to low wholesale market prices following increased supply and the repeal of the carbon price
- a sharp increase from the June 2015 announcement of the closure of Northern power station in May 2016, largely as a result of increased tightening in the wholesale market.

The experiences of other businesses will differ, depending on when they came off contract.

Figure 1.7: Timeline of price drivers and average total cost of electricity for three medium manufacturing businesses in South Australia



Source: ACCC analysis based on price information from three de-identified manufacturers in South Australia and AEMO, Information Hub: average price tables (viewed on 8 September 2017). Average weighted monthly spot prices August 2016 and 2017 from the Department of Environment and Energy[49]

48 AER, *South Australian Distribution Determination 2010–11 to 2014–15*, May 2010, p. v.

49 Department of the Environment and Energy, Weighted average spot prices for the period 25 August to 31 August 2017 and 25 August to 31 August 2016 using NEM-Review™ data sourced on 12 September 2017, Australian Government, September 2017.

1.3.3. Other issues facing commercial and industrial users

Business customers can face similar issues to households, in terms of complexity and a lack of comparability in retail electricity markets. For some small and medium businesses, particularly those without in-house energy management systems or staff with internal energy management expertise, assessing retail electricity proposals can be challenging. Businesses from a range of sectors have noted that energy retailers can provide information in a format which is not readily comparable,[50] and can often also require responses to offers in a relatively short period of time (sometimes only two days).

Submissions from businesses in commercial sectors, including retail, light manufacturing and agriculture, noted that when they sought offers from retailers there was little or no competition between offers. Medium to large business users in South Australia reported that the limited choice of commercially sustainable retail offers had resulted in those businesses changing their buying arrangements to directly source their electricity from the wholesale spot market. Their resultant exposure to the spot price has typically been unhedged due to the lack of financial products in South Australia, over the past two years in particular, to efficiently manage the price risk. These same medium-sized to large sized users (those between 5-60 MW) highlighted that in entering the wholesale electricity spot market they were concerned that developing the necessary expertise required to participate in the wholesale market was outside their core business. Therefore their general preference was to be able to access longer term and affordable retail contracts.

Submissions from a number of peak industry bodies for small to medium commercial and light industrial sectors have called for greater transparency of pricing including more detailed bills (breaking down peak and off peak consumption, retail charges, environmental schemes, network charges), regular price reporting for small, medium and large users, and a tailor made online comparator service or a similar tool for business to help them compare offers and track the market more effectively.[51]

1.3.4. Differences between NEM regions

Electricity market conditions and the number of offers for business customers vary across the NEM. For example, the combination of significant network investment over the past decade, recent increases to gas prices, more concentrated wholesale markets, and the transition from large scale synchronous generation to variable and intermittent renewable energy resources has had a more pronounced effect on retail prices and number of offers in South Australia than any other state in the NEM. The differences across the NEM in terms of price and regulation are detailed in chapters 2 and 3 (particularly for small customers).

The Tasmanian Government has recently taken action to reduce the impact of price rises on Tasmanian businesses by implementing a rebate for medium electricity users of up to $15 per MWh, which equates to a discount of up to 15 per cent against the wholesale contract price.[52] This follows an announcement earlier this year that the Tasmanian Government had worked with Hydro Tasmania to reduce the wholesale contract price of power by around 20 per cent.[53]

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50 See for example, NSW Business Chamber, *Submission to ACCC Issues Paper*, June 2017, p.3.

51 Business SA, *Submission to ACCC Issues Paper*, June 2017, p.1; Queensland Chamber of Commerce and Industry, p. 2

52 Tasmanian Minister for Energy, *$20 million energy rebate for Tasmanian Businesses,* media release*, 6 August 2017*.

53 Tasmanian Minister for Energy *Acting to protect business from power price rises,* media release*, 2 May 2017.*

The Queensland government also recently directed stated-owned Stanwell Corporation to offer more capacity in the NEM and alter its bidding strategies to put downwards pressure on wholesale prices.[54]

1.3.5. Collective buying groups

Under the CCA, groups of businesses may seek the ACCC's approval to collectively bargain in a manner that would otherwise breach the anti-competitive conduct provisions of the CCA, if this conduct will result in a net public benefit.

In response to higher retail prices, a number of groups of businesses have recently approached the ACCC seeking authorisation to collectively bargain for electricity (and/or gas). The arrangements typically involve a group of businesses pooling their electricity demand and approaching retailers for competitive offers on tariffs based on the larger load.

In March 2016, the ACCC granted authorisation to a group of 14 organisations, led by the Melbourne City Council, to jointly negotiate electricity sale agreements. The organisations intended to use their pooled demand to underpin the development of a new 'utility-scale' renewable-energy system connected to the NEM.[55]

In May 2017, the ACCC granted authorisation to a group of 28 organisations lead by the South Australian Chamber of Mines and Energy (**SACOME**) to collectively bargain with retailers for electricity.[56] The SACOME group makes up approximately 15 per cent of South Australia's electricity demand.

The ACCC is currently assessing a similar joint energy purchasing group called the Eastern Energy Buyers Group.[57] The group is largely based in Victoria, and is seeking to jointly secure bids to supply their electricity and gas needs for up to a maximum of 16 petajoules (**PJ**) of gas and 4.5 TWh of electricity. The ACCC granted interim authorisation on 1 September 2017.

A submission to the Inquiry from the Large Format Retailer Association noted that streamlining ACCC processes to secure approval for joint electricity purchasing arrangements would facilitate more businesses taking advantage of these arrangements. However, the Large Format Retailer Association also noted that such collective arrangements cannot protect businesses from significant increases in wholesale prices,[58] which ultimately need to be passed through to users.

The Australian parliament is currently considering a number of amendments to the CCA. For example, proposed amendments to the collective bargaining notification provisions in the CCA will introduce greater flexibility to the collective bargaining approval process for small business. Further, the ACCC will be given the power to issue class exemptions that exempt particular kinds of conduct from the competition provisions of the CCA. A class exemption creates a 'safe harbour' for business and thereby reduces the compliance and administration costs associated with seeking individual exemptions from the CCA. The ACCC will commence consultation on guidance for businesses on these amendments once the amending legislation is passed.

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54 Queensland Department of Energy and Water Supply, *Powering Queensland Plan,* Queensland Government, Brisbane, June 2017.

55 ACCC, *Final Determination of a purchasing group Melbourne City Council & Ors, Authorisations A91532 & A91533*, July 2016.

56 ACCC, *Final Determination of a purchasing group the South Australian Chamber of Mines and Energy Inc & Ors, Authorisations A91567 & A91568*, May 2017.

57 ACCC, *Interim Determination of a purchasing group Eastern Energy Buyers Group, Authorisations A91594 & A91595*, August 2017.

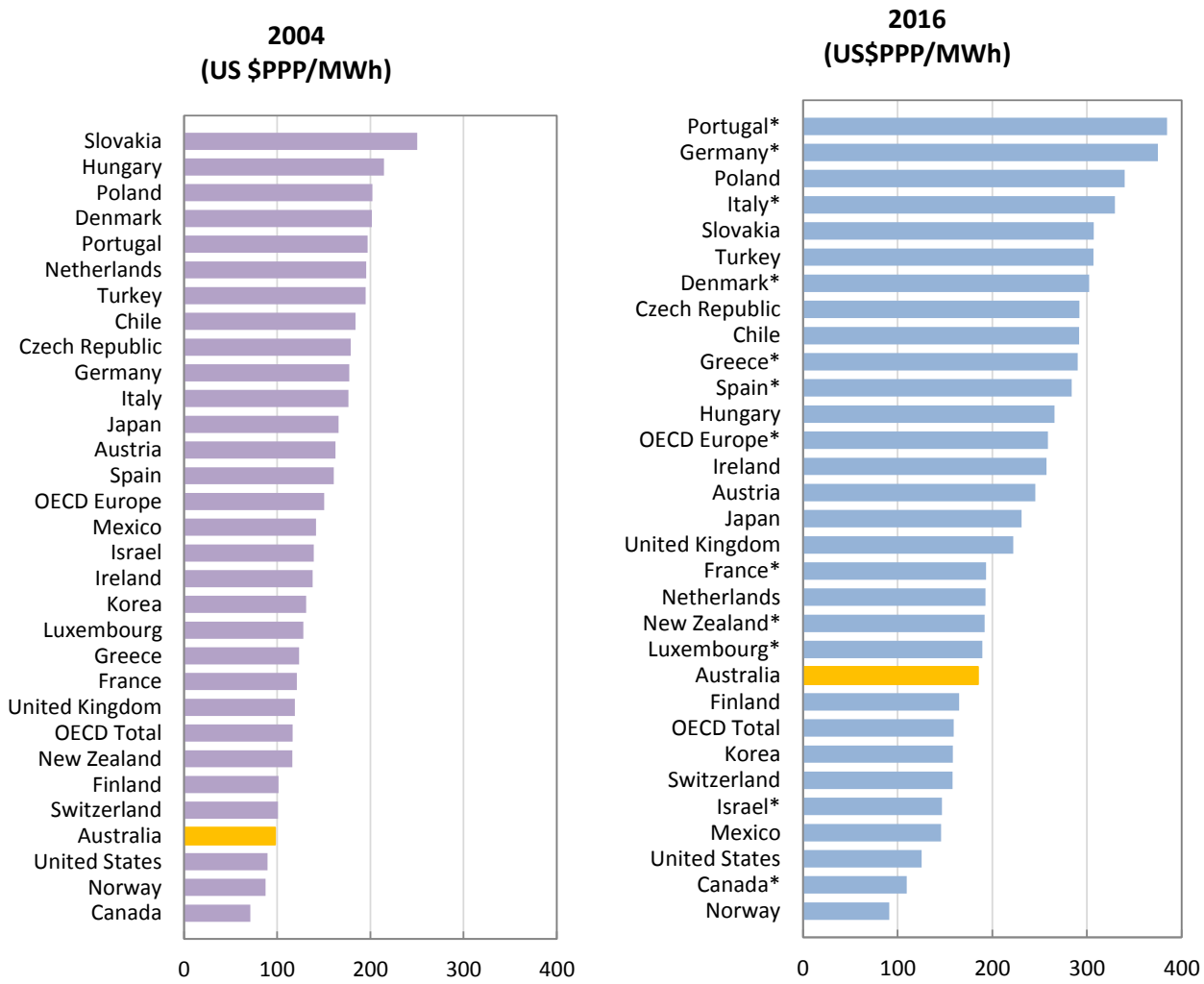
58 Large Format Retail Association, *Submission to ACCC Issues Paper*, 30 June 2017, pp. 6-7.

1.4. International comparison

By world standards, Australia's position in terms of electricity prices has deteriorated substantially. According to the Organisation for Economic Co-operation and Development (**OECD**) data (see Figure 1.8 below), Australia has dropped from the 4th cheapest and below the OECD average in 2004 to the 10th cheapest and above the OECD average in 2016.

Australia's average national electricity price is reported annually by the Australian Government to the OECD via the International Energy Agency. Australia's method for collecting average retail electricity prices has changed over time. In 2004 price information was based on a price series collected by the then Electricity Supply Association of Australia from electricity network and retail businesses and derived from a largely regulated market. The 2015 average retail residential electricity price is an average of most competitive offers available through each given retailer in each network region, weighted by customer number to give a state national average.[59]

Figure 1.8: OECD comparisons of electricity prices across countries[60]



Source: Department of Environment and Energy.
Note: 2015 data, Europe is an average of OECD countries

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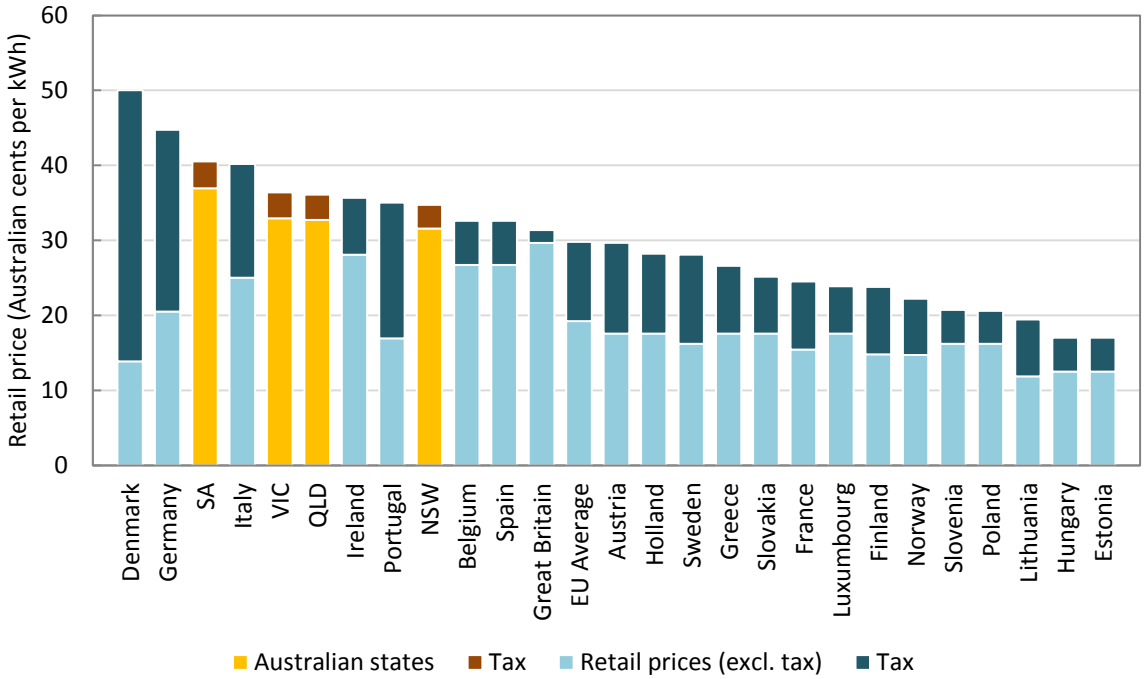
59 Australian Energy Market Commission (**AEMC**), *2016 Residential Electricity Price Trends,* 14 December 2016, pp. 74-75. In the absence of competitive market offers in certain regions including Tasmania, Western Australia, regional Queensland, and the Northern Territory the average price is the regulated standing offer price.

60 Department of Environment and Energy, Adapted from IEA Electricity Information, OECD, Canberra, September 2017.

Other measures have Australia in a much worse position. Analysis undertaken by Carbon + Energy Markets (**CME**) found that Australia's prices were close to the most expensive in the world (see Figure 1.9 below). The difference between these estimates reflects some differences in methodology and also reflects different time periods.

The OECD retail electricity price figure for Australia is a weighted average of advertised market offers across Australia and may not represent what Australian users are actually paying. In contrast, the comparative analysis from CME (Figure 1.9) uses a weighted median offer as at July 2017 from Australia's three largest retailers that assume a proportion of customers, by retailer, and also by the proportion of customers in competitive markets that are on standing offers and a segment of customers may not be receiving conditional discounts.[61] There are currently no national surveys conducted in Australia that inform price reporting around what customers are actually paying.

Figure 1.9: Comparison of residential electricity prices (before and after tax) (Australian cents per kWh) (May 2017 prices in Australia, 2015 prices in European countries)[62]



Source: Adapted from CME, The retail electricity market for households and small businesses in Victoria – Analysis of offers and bills, July 2017

On any measure, it is clear that electricity prices in Australia have gone from a source of competitive advantage to a drain on business productivity and a serious affordability concern for households.

61 CME, *The retail electricity market for households and small businesses in Victoria – Analysis of offers and bills*, July 2017, p. 36.

62 Ibid, p. 44.

1.5. Other inquiries into the retail electricity market

This Inquiry is only one of a number of studies that have examined the issue of the prices and supply of retail electricity in Australia, and the extent to which changes in those prices over the past ten years can be attributed to particular causes. Recent work by other organisations includes:

- The Independent Review into the Future Security of the National Electricity Market (the **Finkel Review**), which set out a plan to maintain security and reliability in the NEM in light of the transition to significant renewable generation. The Finkel Review made a number of recommendations for increased security, future reliability, rewarding consumers, and lower emissions.
- The Victorian Review, which included modelling of the components of the retail bill.[63] Based on estimating customers' bills and deducting other components such as estimates of network, metering, environmental and wholesale charges, that review found that retailers' charges were higher than the wholesale and network components of the bill.[64] The Victorian Review also recommended that a regulated basic offer should be made available in the market.
- On 19 September 2017 the Australian Energy Council released analysis of the Victorian Review by Oakley Greenwood.[65] Oakley Greenwood's analysis argues that the Victorian Review's recommendation that retailers should be required to provide a regulated basic offer is likely to significantly reduce the level of competition and innovation in the retail electricity market.[66]
- The Australian Energy Market Commission's (**AEMC**) annual Residential Electricity Price Trends report, which examines the expected overall price trends in the residential electricity market over a four year reporting period, as well as looking at the trends in three constituent components of those costs—network costs, environmental and other policy costs, and competitive market (wholesale and retail) costs. The report does not separately report on the retail component, instead utilising a 'residual method' that subtracts all other costs to determine the retail component, but noting that also reflects potential modelling errors in other cost components.[67]
- The AEMC's annual Retail Competition Review, which examines a number of indicators of retail competition in electricity and gas. As part of the review, the AEMC examines the retail offers made by retailers. The 2017 report also examined the gross margins achieved by retailers, based on information voluntarily provided by some retailers. The AEMC also noted limitations with gross margin analysis and suggested that the ACCC Inquiry could shed further light on components of the gross retail margin for a broader range of retailers.[68]
- The Grattan Institute's paper, *Price shock: is the retail electricity market failing consumers?* This report modelled wholesale, environmental and network costs for retailers in Victoria. It noted however that there was a lack of data about retailers' cost structures (and which consumers are on what offers) that limited the ability to fully assess retailer margins.[69] The report noted the potential for the AEMC or ACCC to formally obtain this data to more fully analyse retailer margins.

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63 Ibid.

64 CME, July 2017, pp. 34-42.

65 Oakley Greenwood, *Review of the Thwaites report and associated research*, prepared for the Australian Energy Council, 19 September 2017.

66 Ibid, p. 4.

67 AEMC, *2016* Residential Electricity Price Trends, pp. 79-80.

68 AEMC, *2017 Retail Energy Competition Review*, 25 July 2017, p. 209.

69 Grattan Institute, *Price shock: is the retail electricity market failing consumers?* pp.13-20, 30.

- The St Vincent de Paul Society also conducts annual reporting of generally available retail offers for households across each state in the NEM and in 2016 undertook an analysis of the retail price.[70]
- Various state and territory government regulated retail pricing decisions. State governments are responsible for pricing policy and as part of that, they may regulate electricity prices. At present, prices are regulated in the ACT, Tasmania and regional Queensland by the ACT Independent Competition and Regulatory Commission (**ICRC**), Office of the Tasmanian Economic Regulator (**OTTER**) and the Queensland Competition Authority (**QCA**) (respectively). In the past, the Independent Pricing and Regulatory Tribunal NSW (**IPART**), the Essential Services Commission of Victoria (**ESC Victoria**) and the Essential Services Commission of South Australia (**ESCOSA**) regulated prices in NSW, Victoria and South Australia respectively. Typically, these regulators relied on modelling wholesale market purchases, including hedging, and environmental scheme costs; using a pass-through of network costs from AER determinations, and a variety of approaches to retail costs, including from information requests, benchmarking and public sources. In some cases, the regulator then modelled an explicit allocation for retail margin.
- Following amendments to the National Electricity Law (**NEL**) in December 2016, the AER now has a wholesale electricity market monitoring responsibility. The AER is currently consulting on its statement of approach for this role.[71] The AER must report on its findings every two years and its first report is due in December 2018.
- The Grattan Institute's paper*, Next Generation: the long-term future of the National Electricity Market*, sets out a number of steps that need to be undertaken to restore confidence in the existing structure of the NEM.[72]

1.5.1. Implications of existing work for the ACCC's Inquiry

Although there are differences in the findings between recent key reports into retail electricity competition and pricing, a common theme across the reports is that retail electricity markets are complex, lack transparency, and that all consumers are not equally benefitting from competition. The differing findings can partly be attributed to different methodology used to estimate the components of retail electricity prices and to find the main drivers of changes in those prices.

The ACCC has had regard to these studies in conducting its modelling and analysis. The ACCC will build on the work of AEMC, the Grattan Institute and the Victorian Review to address the lack of information on the retail costs and margins currently achieved by retailers, in order to provide a more robust assessment of retail electricity market competition.

Through the direction given by the Treasurer, the ACCC has powers under the CCA to compel parties to provide information and data to the ACCC. The ACCC has sourced a great deal of insightful information using these powers in the Inquiry which underpin much of the analysis in this report.

In particular, the ACCC has uncovered information which suggests the electricity affordability problem in Australia is due to no single cause, but rather is the result of many factors. These factors are described in detail in chapters 2 and 3.

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70 St Vincent de Paul, *The NEM – a hazy retail maze*, December 2016.

71 AER, *Wholesale electricity market performance monitoring report – Statement of approach*, viewed 13 September 2017, https://www.aer.gov.au/wholesale-markets/market-guidelines-reviews/wholesale-electricity-market-performance-monitoring-report-statement-of-approach.

72 Grattan Institute, *Next Generation: the long-term future of the National Electricity Market*, September 2017.

The drivers of price increases have been different across Australia but the end result is broadly similar: Australians are paying much more for electricity than they should be.

This report sets out in more detail the issues the ACCC has identified in the operation of electricity markets in Australia. While the ACCC's conclusions are, at this stage, preliminary in nature, the ACCC has identified a number of areas where changes can be made to benefit consumers and businesses.

2. What has driven the increases in retail electricity prices?

Key points

- Network costs were the largest component of retailers' costs in 2015–16, making up around 48 per cent of an average bill charged to a residential customer. Wholesale costs (22 per cent), environmental costs (7 per cent), retailer costs (16 per cent) and retail earnings before interest, tax, depreciation and amortisation (**EBITDA**) margins (8 per cent) made up the rest of the components of the average bill.
- In real terms, based on data provided by retailers, residential charges have increased by around 30 per cent on a per customer basis and by 47 per cent on a cents per kWh basis (across the NEM) between 2007–08 and 2015–16.
- After considering wholesale price increases in 2016–17, the ACCC estimates that residential charges would have increased by 44 per cent on a per customer basis and 63 per cent on a cents per kWh since 2007–08.
- Data provided by retailers shows that increases in electricity prices over the period from 2007–08 to 2015–16 were primarily driven by higher network costs as well as, to a lesser extent, increasing environmental scheme costs and retailer costs.
- In contrast, average wholesale costs remained relatively flat over a long period. Combined with decreasing average electricity usage, this resulted in a decline in the contribution of wholesale costs to retailer costs in the period to 2015–16. However, the ACCC estimates that higher wholesale prices in 2016–17 have driven the more recent increases in retail prices.
- Business customers, including large C&I users, have also seen large increases in their bills over the same period. These customers are more exposed to changes in network and wholesale costs, as these components make up a greater proportion of a large user's total bill.
- The bill increases observed by the ACCC from retailers' data are somewhat lower than reported price increases by the Australian Bureau of Statistics (**ABS**). On a per customer basis, a decrease in residential customers' electricity usage over time, including through improved energy efficiency and installation of solar panels, has dampened the increase in certain cost components. Also, as customers change to cheaper market offers, this reduces the average bill that the particular customer pays.

Chapter 1 of this report examined the retail prices being faced by Australian households and businesses for their electricity use. While there are a number of difficulties in examining the exact position of Australian prices compared to world prices over time, it is clear that the affordability of retail electricity services has decreased over the past ten years.

This chapter examines the drivers of these increases in prices through the use of data collected from retailers about their input costs. That is, what components of the retail price for electricity have increased and contributed to the overall increase in retail electricity prices? The ACCC has made this assessment using the four common categories of costs that are typically identified in analysis of this issue, namely:

- wholesale costs
- network costs (transmission and distribution)
- environmental (green) scheme costs

- retail costs and margins.

The primary source for the information presented and analysed in this chapter is data obtained from retailers by the ACCC pursuant to its compulsory information gathering powers.[73] The ACCC's Inquiry can be distinguished in this regard from work undertaken by other organisations. Generally, outside of state regulator price-setting processes, other organisations have had limited access to data directly from retailers as to the costs that they incurred for the above four cost categories, having to instead model or infer costs from publicly available information sources.

In this chapter, we firstly present the high level 'cost stack' that provides an indication of the relative impacts of the costs on the overall prices paid for retail electricity. The following sections then examine each of the relevant cost components in more detail.

Where relevant, this chapter also draws on findings from public information and a number of recent reports. These include work by the Grattan Institute, AEMC, the Victorian Review, state regulators and a number of other entities including consumer groups. The ACCC has used this information to check and corroborate its data, as well as inform it as to trends in its own data.

Box 2.1: The ACCC's data and methodology

Data

The ACCC sought information from 16 current retailers covering five years of data – 2007–08, 2010–11, 2013–14, 2014–15 and 2015–16.[74] These retailers provided electricity to over 98 per cent of residential customers across the NEM in the first quarter of 2016–17. The ACCC sought information on wholesale, network, environmental and retailer costs, as well as revenues, margins and usage information.

Given the timing of its data collection, the ACCC was not able to obtain data for 2016–17. As noted elsewhere in this report, the 2016–17 year saw significant changes in wholesale costs in particular. These are not captured in the ACCC's data. The ACCC intends to obtain data for 2016–17 for use in its final report.

The ACCC sought information for three different customer types – residential, SME, and C&I. Generally speaking, the ACCC found that data in relation to residential customers was more complete, but has been able to draw some findings in relation to business customers.

Some retailers found data in relation to the two older time periods, particularly 2007–08, to be difficult to obtain and provide. As such, in certain geographic regions, the ACCC had a more limited data set for those years.

Some retailers did not record certain categories of costs on a state by state basis and adopted allocation methodologies to estimate costs.

Due to data issues, the results presented in charts in this chapter excludes information about the ACT, and Queensland data only covers the south east part of Queensland which is open to competition. Information about Tasmania is presented in certain charts where data by state is shown. Charts for the NEM exclude Tasmania due to data quality issues for earlier years for Tasmania. The ACCC will seek to examine these regions in more detail in its final report.

[73] CCA, s. 95ZK.

[74] Certain retailers provided data on a calendar year basis.

Methodology

The ACCC examined and 'cleaned' the returned data for inconsistencies or potential errors, and checked it against other data sources. The ACCC engaged with retailers to clarify identified inconsistencies and errors.

The ACCC then used retailer revenue, cost and usage data to obtain measures of the overall 'cost stacks' for retailers, before dividing by customer numbers to obtain a 'dollar per customer' cost stack and by kWh served to obtain a 'cents per kWh' cost stack. The ACCC then examined the components that contributed to those stacks.

The 'cents per kWh' measure can be considered a proxy for the effective price faced by an electricity user for a unit of electricity. It does not take account of usage differences between customers which can vary dramatically.

The 'dollar per customer' measure can be considered a proxy for the annual amount that an average customer would pay for electricity. However, it is only a general representation due to significant usage differences between geographic regions, time periods and customer types.

Much of the retailer data was provided in August and September, very close to the finalisation of this preliminary report. Additionally, not all data sought was received from all retailers in time to be analysed and included. The ACCC will continue to analyse the data for its final report in June 2018, as well as examine in more detail differences between different retailer types, geographic regions and business structures.

As the ACCC continues to work with the data set, it is possible that results presented in this preliminary report may change between now and the final report.

Unless otherwise stated, the ACCC has presented real (inflation adjusted) numbers in this report, in 2015–16 dollars. NEM-wide graphs are volume-weighted by usage or customer numbers as relevant. GST is not included in the graphs presented.

Percentage values in graphs may not sum to 100 due to rounding.

2.1. Cost stacks: what are the components of retailers' costs?

At a simple level, a 'cost stack' represents the different cost and margin components that go into making up the amounts charged by retailers to their customers. That is, the contribution that each of network costs, wholesale electricity costs, environmental scheme costs, and retail costs and margins, make to the overall level of costs.

This section examines the level of each component, and the overall changes in cost stacks, between 2007–08 and 2015–16. The subsequent sections of the chapter then examine each individual cost component further.

Given that the results achieved are different for different customer types, the ACCC has divided its analysis in this section into discussion of results for residential and business customers. Retailers will not always have a clear distinction between customer types for all categories of costs – for example, a retailer may buy all of its wholesale energy for its portfolio on a combined basis. However, the evidence available to the ACCC suggests that there are differences in the way that a number of costs are accounted for by retailers.

2.1.1. Residential customers

This section firstly examines the cost components, and changes in those components, on a NEM-wide basis, before then examining regional differences.

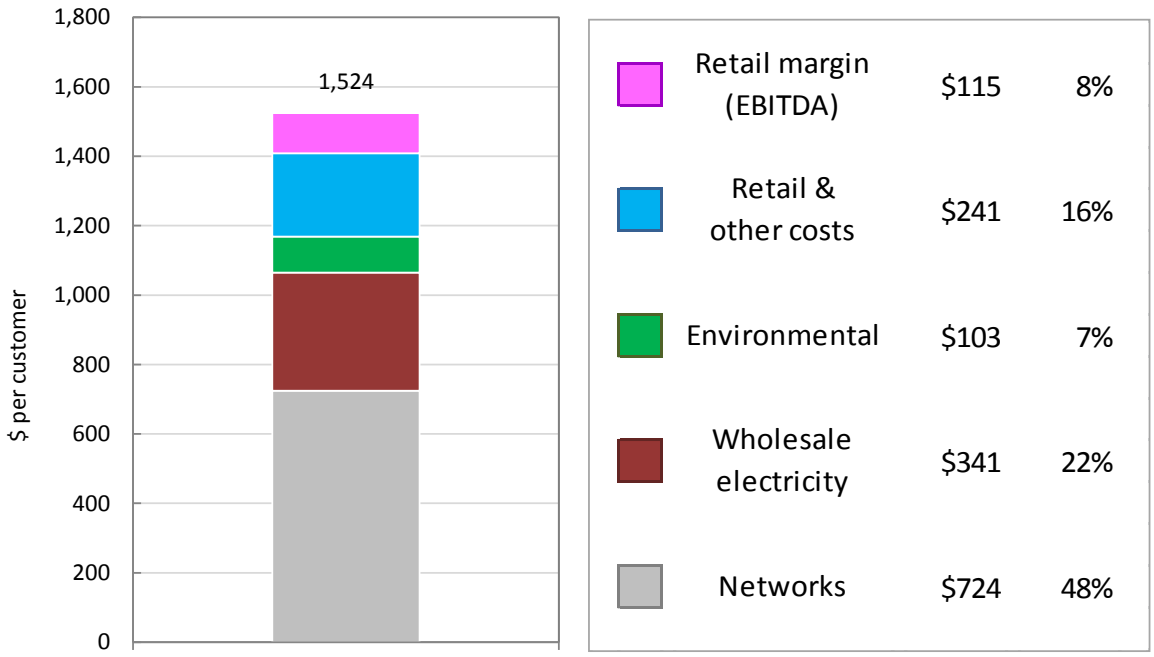
NEM

Figure 2.1 below shows the average cost stack breakdown for 2015–16, of the average revenue per customer received by all retailers, for residential customers.[75]

This shows the:

- wholesale costs of purchasing electricity from the NEM (or of generation as relevant in the case of vertically integrated gentailers), and of managing hedging and price exposure (rather than simply the cost of electricity on the spot market)
- costs charged by transmission and distribution network operators for the transmission of electricity
- costs of complying with environmental (green) schemes[76]
- the costs of running a retail business, such as billing, marketing and customer assistance costs
- a measure of profitability. The ACCC has used EBITDA in the analysis in this chapter.

Figure 2.1: Components of an average residential customer bill across the NEM (excluding Tasmania) (2015/16, $ per customer,) excluding GST



Source: ACCC analysis based on retailers' data. This figure does not include data for Tasmania.[77]

[75] The ACCC has based its calculations on the average revenue figures provided by retailers for each year of data that was requested. The average revenue figures were somewhat different to estimates based on constructing a 'representative customer bill' as used by some other recent estimates.

[76] This includes the costs of complying with the RET, state-based certificate and efficiency schemes, and state-based premium feed-in tariff schemes. See section 2.4 below.

Figure 2.1 is an aggregated summary of retailer costs that incorporates information across a number of different retailer and residential customer types, and across geographic regions. It demonstrates the drivers of retailer costs and therefore customer bills for 2015–16.

Figure 2.1 demonstrates that in 2015–16, the largest component of the residential bill was the cost incurred for transmitting electricity over transmission and distribution networks. This makes up around 48 per cent of the overall bill. Wholesale energy costs made up 22 per cent, although this percentage is expected to increase significantly in 2016–17.[78] Retailers' costs of operations made up around 16 per cent of the cost stack, green scheme costs 7 per cent and the remaining 8 per cent is attributed to retailer EBITDA margin.[79] This EBITDA margin reflects a level of return on the retailer's operations and should in theory reflect the risks faced by retailers due to their operating and regulatory environment.[80]

Both the overall amount and the proportions of overall costs that can be attributed to particular cost components have changed over time.

Figure 2.2 shows the changes in the average revenue per customer achieved by retailers that can be attributed to particular components over the period from 2007–08 to 2015–16. Figure 2.3 shows the equivalent information on a cents per kWh basis. As noted above, Figure 2.2 incorporates the effect of changes in usage over time (where decreases in usage may offset some of the increases in bills) while Figure 2.3 represents a proxy for the effective price changes for a unit of energy over the period.

Figure 2.2 shows that, on an annual dollars per customer basis, retailers' data shows that there was an overall real increase of 29 per cent in the amounts charged by retailers over the period from 2007–08 to 2015–16. Figure 2.3 shows that, on a cents per kWh basis, the price increase was around 47 per cent in real terms.

Box 2.2: Comparison between changes in these cost stacks and CPI figures

Figure 2.2 shows that there was a 29 per cent increase (in real terms) between the average revenue per customer from 2007–08 to 2015–16. This suggests that bills for customers increased by almost a third over that time period.

However, this is significantly lower than real price increases indicated by the ABS's CPI data presented in chapter 1. For the period from June 2008 to June 2016, the real price increase in the ABS's CPI electricity price data was 54 per cent (see Figure 1.2 in chapter 1 above).

The ACCC notes that there are two key reasons that may explain some of the difference.

Firstly, the data in Figure 2.2 is presented on a 'dollars per customer' basis. One implication of this is that decreases in overall electricity consumption per customer have partially offset rises in the underlying cost components. Figure 2.3, presented on a cents per kwh basis, demonstrates a 47 per cent increase, which is closer to the ABS figures.

Decreases in consumption can be attributed to a number of factors, including:

- improved energy efficiency in appliances and buildings
- reductions in usage in response to higher bills

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77 To allow for a like-with-like comparison with Figure 2.2 we have excluded Tasmania from this chart. The ACCC did not have comparable 2007–08 information for Tasmania.

78 We discuss our estimate of the impact of 2016–17 wholesale price changes on residential bills in Box 2.4 of this chapter.

79 EBITDA may overstate the 'true' margin that a retailer obtains as it looks at returns before depreciation, amortisation, interest and tax are accounted for. To the extent that these are significant costs, their return will be lower than 8 per cent. Ideally, an assessment of return on capital should also be made, but the ACCC did not have information on capital employed for this report.

80 These risks may change over time. See for example. AGL, *Submission to ACCC Issues Paper*, July 2017, p. 13; EnergyAustralia, *Submission to ACCC Issues Paper*, 30 June 2017, p. 26.

- the effect of greater take-up of rooftop solar that will lead to increase in usage of own generation capacity and hence decreases in usage of NEM electricity.

The impact of each of these individual effects is difficult to separate out based on the data available to the ACCC. Box 2.3 below provides an indication of the likely impact of solar customers. Overall, the ACCC notes that retailers' data suggests decreases in overall per customer usage across the NEM of 12 per cent, and as high as 24 per cent in south east Queensland, between 2007–08 and 2015–16.

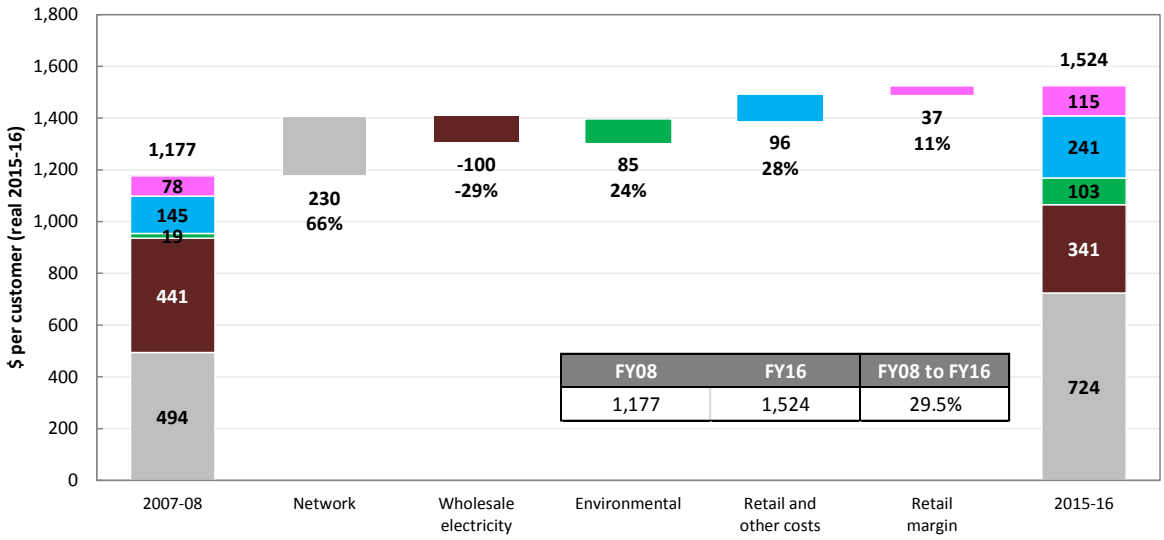
Secondly, the ACCC notes that the ABS's CPI price index was until recently based entirely on standing offer prices, rather than market offers which will generally be lower. In many states, the percentage of customers on standing offers has decreased over time and is now relatively low – for example 9 per cent in Victoria, 15 per cent in South Australia, 24 per cent in NSW and 26 per cent in south east Queensland. Accordingly, it would be reasonable to expect a smaller increase in bills and prices as these customers switch away from standing offer plans.

Finally, the ACCC again notes that its data excludes expected recent changes in wholesale costs in 2016–17 and retail price increases on 1 January (Victoria) and 1 July 2017 (other jurisdictions). Accordingly, the full change in prices since 2007–08 is not captured in the ACCC's current data. Box 2.4 below provides estimates of price increases in 2016–17.

The ACCC will seek more recent data from retailers in the next phase of the Inquiry, and detail its findings in its final report in June 2018.

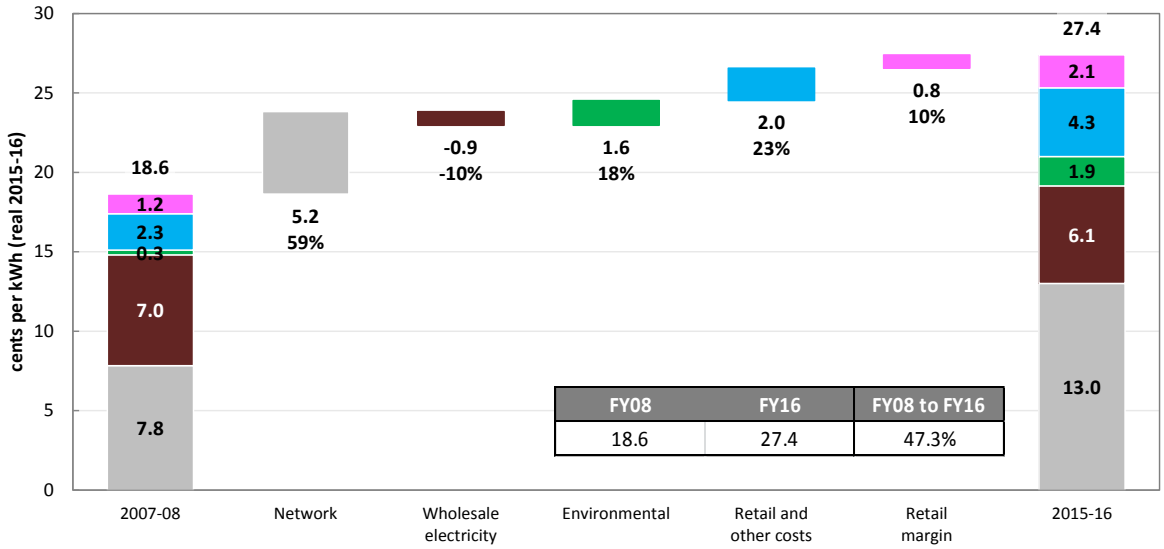
Figure 2.2 and Figure 2.3 also show the proportion of the overall change in the real cost stack or average customer bill that can be attributed to the relevant component. For example, in Figure 2.2, of the overall 29 per cent or $347 increase in residential customers' bills, 66 per cent of the increase can be attributed to network costs. Wholesale costs decreased in real terms, and so constitute a negative 29 per cent of the overall increase.

Figure 2.2: Changes in average residential customer bill from 2007–08 to 2015–16, NEM-wide (excluding Tasmania) – real values in 2015–16 dollars, excluding GST



Source: ACCC analysis based on retailers' data.

Figure 2.3: Changes in average residential customer effective prices (c/kWh) from 2007–08 to 2015–16, NEM-wide (excluding Tasmania) – real values in 2015–16 dollars, excluding GST



Source: ACCC analysis based on retailers' data.

Figure 2.2 and Figure 2.3 show that the main driver of changes in customer bills over the 2007–08 to 2015–16 period is the significant increase in network costs. The reasons for this increase include regulatory requirements, financing costs and the revenue determination process, and are discussed further in section 2.3 and in chapter 3.

Environmental schemes have also caused a significant component of the increase in overall customer bills. These are driven by the take-up of jurisdictional premium feed-in tariff schemes and an increasing federal Renewable Energy Target (**RET**), as discussed in section 2.4 below.

The two retail components were the second largest driver of the increases in residential customers' bills over the relevant period. In particular, increases in retail costs led to a notable increase, although not as large as those from network costs. The EBITDA retail margin component also increased on average over the period, although by a smaller amount. This is discussed further in section 2.5.

While much recent debate has focused on increases in wholesale costs, this impact has mostly taken place in 2016–17. This is not captured in the retailer data currently available to the ACCC, which shows wholesale costs were relatively constant in nominal terms between 2007–08 to 2015–16, and actually decreased in real terms. This is reflected in the negative impact in Figure 2.2 and Figure 2.3 above. A 12 per cent overall decrease in usage, as discussed in Box 2.2, across the period has also meant that wholesale costs, which are variable in nature, have decreased as a proportion of the overall cost stack. Wholesale costs are discussed further in section 2.2 below.

Box 2.3: Estimated changes to non-solar customers' cost stack and bills

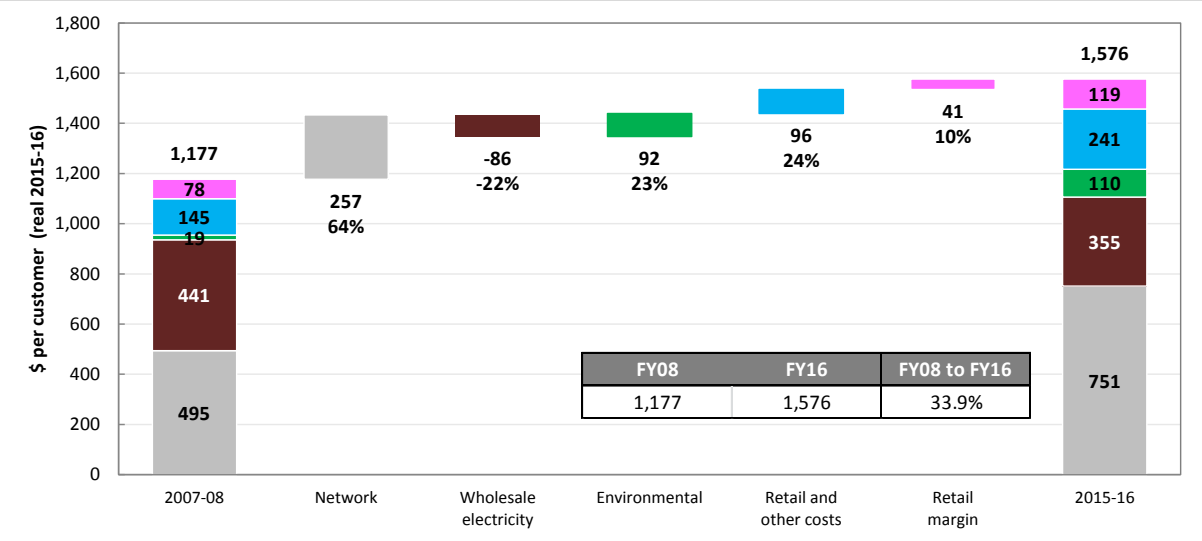
The preceding cost stack analysis includes a range of residential customers. Different customers will experience different bills over time depending on their particular circumstances. One notable distinction between customer types is that solar customers typically use less electricity from the NEM as their solar panels can provide for some of their own electricity usage requirements. This results in lower average bills for customers with solar panels (even before feed-in tariff payments are accounted for).

Higher solar penetration is likely an important driver of the fall in average residential energy usage over the period the ACCC has examined. Estimating the impact of removing solar customers from the data provides an indication of the underlying cost stack information for residential customers without solar panels.

In Figure 2.4 we have estimated a 2015–16 cost stack for average residential customers without solar panels. The removal of solar customers from our data shows that the average bill per residential customer without solar panels is $1,576 in 2015–16. This is $52 higher than the average residential bill per customer of $1,524 shown above in Figure 2.2.

This is because the size of each of the elements of the cost stack, except for retail costs, is dependent on customer usage. Therefore non-solar customers will have a relatively higher bill than the average cost stack reported in Figure 2.2 and Figure 2.3.

Figure 2.4: Estimated changes in average residential bill without solar from 2007–08 to 2015–16, NEM-wide (excluding Tasmania) – real values in 2015–16 dollars, excluding GST



Source: ACCC analysis based on retailers' data.

To estimate the impact, we identified solar penetration rates and the difference in electricity usage between solar and non-solar customers. Solar penetration varies by state and data from the Clean Energy Regulator shows the highest solar penetration rates are in Queensland and South Australia at 34 per cent and 32 per cent respectively. Solar penetration in NSW, Victoria and Tasmania is relatively lower ranging from 15 per cent to 17 per cent.[81] ACIL Allen, as part of their residential bill benchmark analysis, estimated the amount of electricity the average solar customer usage from the NEM.[82] This amount differs by state – for example Queensland households with solar on average use 1,421 kWh less electricity from the NEM, while in Victoria the difference was 635 kWh.[83]

81 Clean Energy Regulator, *Small-scale renewable energy hits record-breaking capacity in Australia*, media release, 31 August 2017.

82 ACIL Allen Consulting, Electricity bill benchmarks for residential customers, March 2015.

83 Ibid, pp. 24, 33.

Box 2.4: Estimated 2016–17 cost stack, and the effect of wholesale price rises

The 2016–17 year saw a significant increase in wholesale spot prices, which increased 51 per cent on average across the NEM (see Figure 3.1 in chapter 3 below). During the same period there was also a 3 per cent decline in network costs. As noted in Box 2.1, given the timing of the data collection exercise, we have not yet been able to collect 2016–17 data from retailers.

The ACCC intends to undertake an in depth analysis of 2016–17 data for its final report, once information has been provided by retailers. In the interim, we have estimated the bill impact of changes in wholesale and network costs.

Accounting for these two changes predicts that the overall price increase since 2007-08 rises from 29.5 per cent to 43.7 per cent, meaning 2016–17 price increases increased bills by a further 14.2 percentage points alone.

We note that changes in the wholesale spot price may not necessarily translate directly into retail bill changes. This is because retailers have long term hedging contracts in place which may result in a delayed impact to their underlying costs. However, changes in the spot price are still a useful guide to changes in a retailer's underlying wholesale cost.

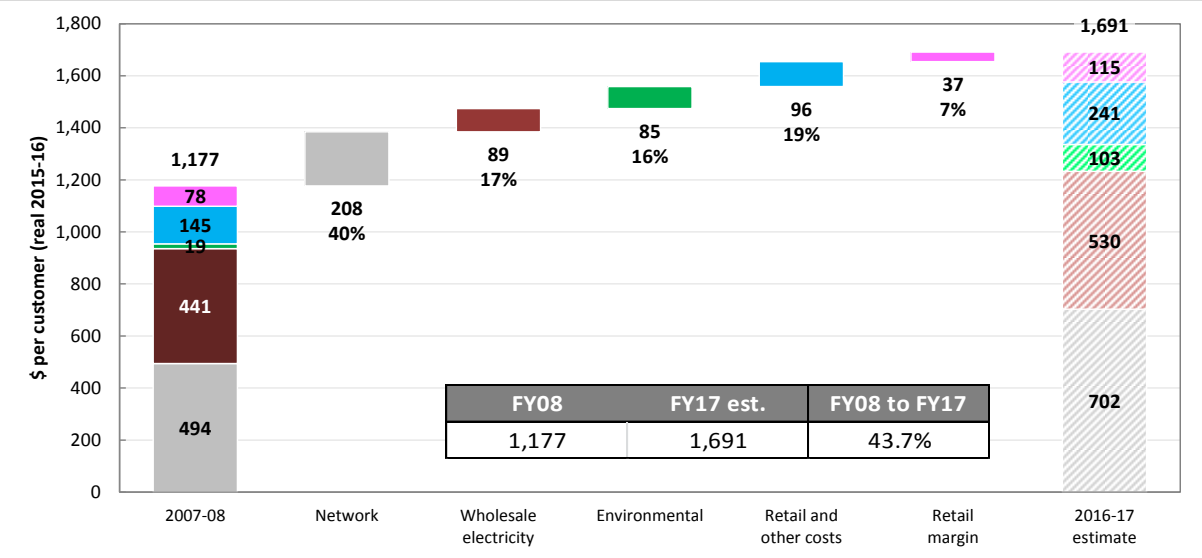
The ACCC notes that significant price increases for regulated or standing offers were in fact made by 'local area retailers'[84] in 2016–17 (ranging from 3.4 per cent in Tasmania to 12.8 per cent in South Australia).[85] Prices also subsequently increased in 2017–18, particularly in NSW, SA and ACT. Table 1.1 in chapter 1 of this report outlines some of these price increases.

Figure 2.5 and Figure 2.6 below show the ACCC estimated change in the costs of each cost stack component from 2007–08 to 2016–17, after accounting for the changes in wholesale and network costs (while holding other components steady). The figure shows that the increase in wholesale costs in a single year has reversed the trend of declining wholesale costs in real terms from 2007–08 to 2015–16. Although network costs decreased relative to 2015–16, this did not have a material impact on the overall cost stack. We note that we have not included the direct impact of 1 July 2017 retail price changes in this estimate.

84 Local area retailers are obliged to offer to supply energy in their associated distribution supply districts to customers to new and existing customers.

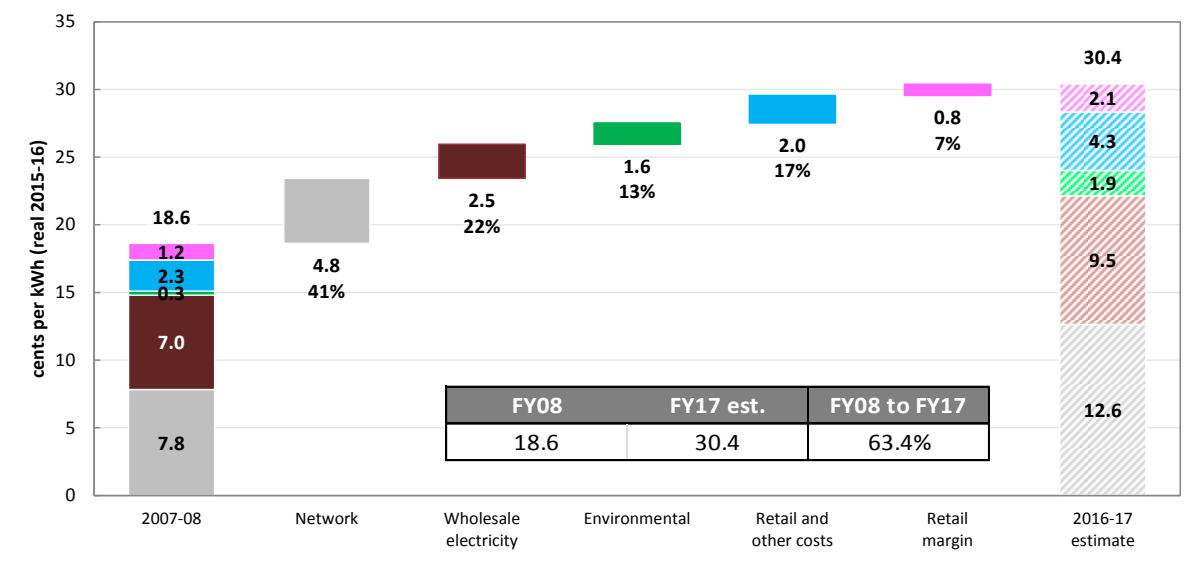
85 AER, 2017 State of the energy market, p. 131.

Figure 2.5: Estimated change in average residential bill per customer from 2007–08 to 2016–17, NEM-wide (excluding Tasmania) – real values in 2015–16 dollars, excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Figure 2.6: Estimated change in average residential effective prices (c/kWh) from 2007–08 to 2016–17, NEM-wide (excluding Tasmania) – real values in 2015–16 dollars, excluding GST

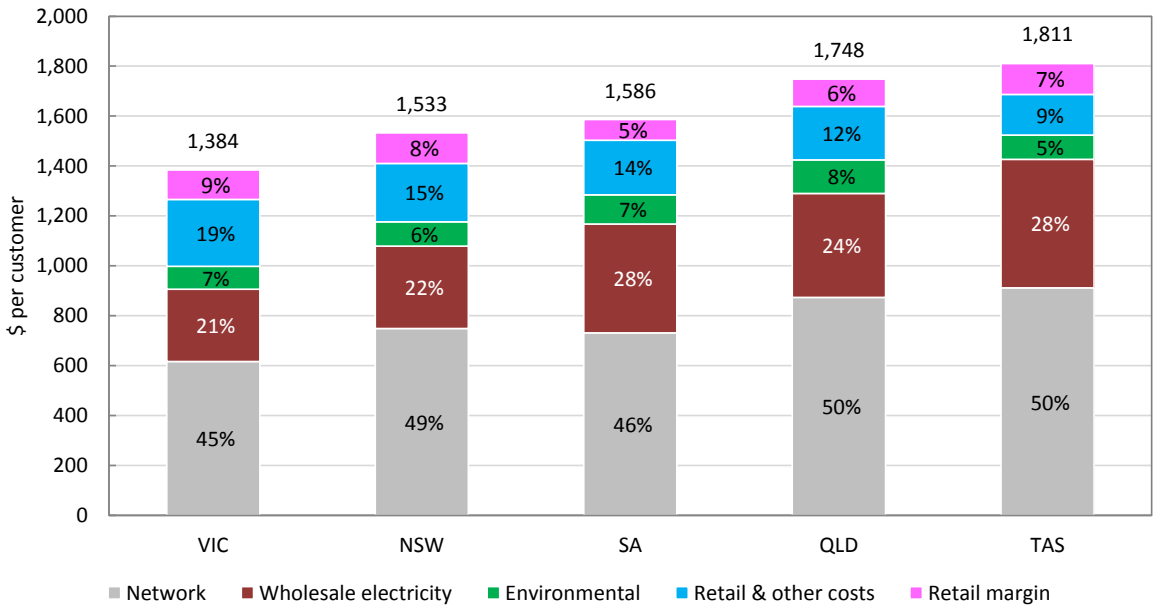


Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Regional cost stacks

Given that market conditions, and hence outcomes in cost stacks and prices, can vary significantly by region within the NEM, the ACCC has also examined the level and changes in regional costs stacks on a regional basis. Figure 2.7 presents the differing cost stacks across regions in 2015–16.

Figure 2.7: Average residential bills by state, 2015–16, $ per customer excluding GST



Source: ACCC analysis based on retailers' data.

Notes: average electricity usage differs from state to state. Usage is highest in Tasmania and Queensland as they are almost entirely reliant on electricity. Usage is lowest in Victoria due to a high reliance on gas. ACT is not included due to data issues.

The ACCC again notes that, as discussed above in Box 2.2, changes in usage patterns can lead to differences in outcomes for customers, even if costs have not changed significantly. This is reflected in Figure 2.7, where average usage figures are quite different across the different states. For example, Victoria has the lowest typical consumption (largely due to the use of gas), while Tasmania typically has the highest.[86]

On a percentage basis, the relativities between the five different cost stack components remain similar. That is, network costs represent the largest portion of the cost stack for all regions, followed by wholesale charges and then retail costs. Green schemes and the retail margin are the smallest components, although their relative significance depends on the state. Furthermore, while the relativities are generally similar, there are some differences between regions, including:

- network costs were proportionally more significant in NSW and Queensland
- retail costs were proportionally larger in Victoria and smaller in Tasmania
- retail margins were somewhat higher in Victoria and NSW
- there was a higher wholesale component of the cost stack in South Australia and Tasmania
- environmental scheme costs were similar in percentage terms in all states (although they were highest in Queensland and lowest in Tasmania).

[86] ACIL Allen Consulting, March 2015, p. 23.

These differences are explored further in the following sections of this chapter.

The ACCC also notes that the overall levels of these components need to be distinguished from the changes over time. The following pages present changes in the cost stack in particular NEM regions over time based on the ACCC's analysis of retailers' data. For each region there are four charts showing:

- the change in each region's cost stack from 2007–08 to 2015–16 on a dollars per customer basis and cents per kWh basis
- the **estimated** change in cost stack from 2007–08 to 2016–17 on a dollars per customer basis and cents per kWh basis, using the methodology discussed in Box 2.1 above.

Charts for Tasmania have not been provided due to issues with quality of data from earlier years.

The regional data provided by retailers indicates that, while there is an overall increase in the cost stacks in all states on a cents per kWh basis, the drivers of price changes vary between states. Significant regional observations in the data are:

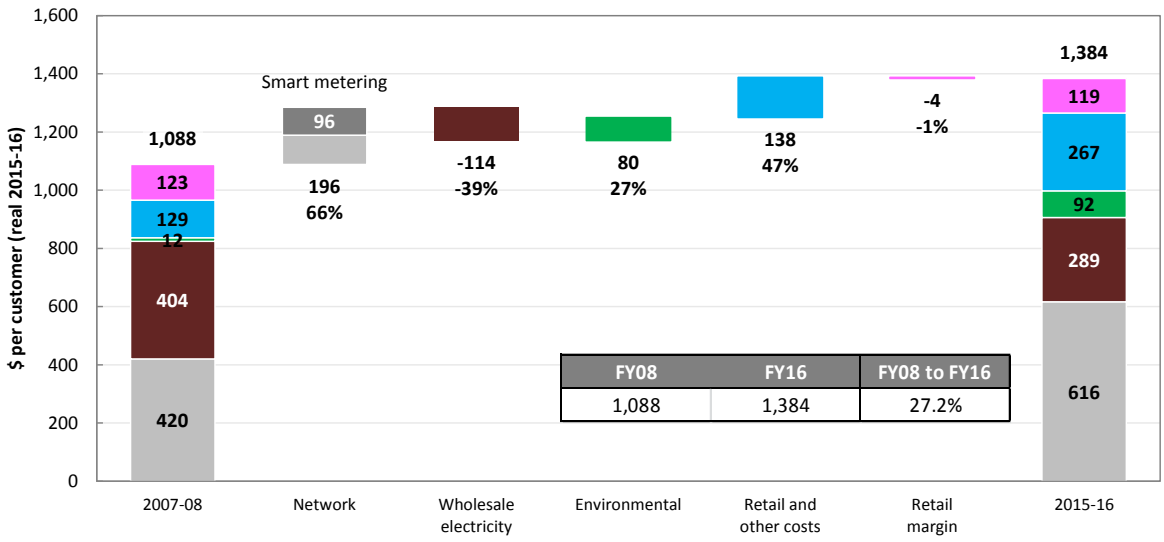
- there was a much larger increase in the effect of retail costs in Victoria than in other states
- network costs were a significant component of increases in all states, but increases in Victoria were partly attributable to the rollout of smart meters
- retail margins increased significantly in NSW – although this result was largely driven by one year of negative margin in 2007–08 – and have decreased in some states
- increases due to environmental costs were lowest in NSW.

These outcomes are examined more in the following sections of this chapter.

Victoria

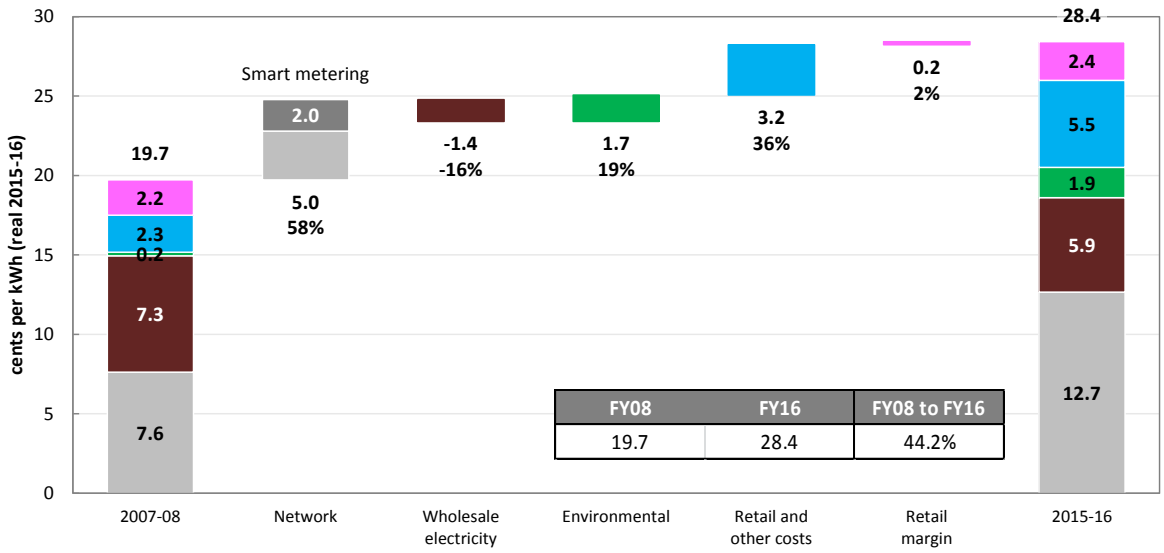
Figure 2.8 and Figure 2.9 are based on actual numbers provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.8: Change in average Victorian residential bill per customer from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

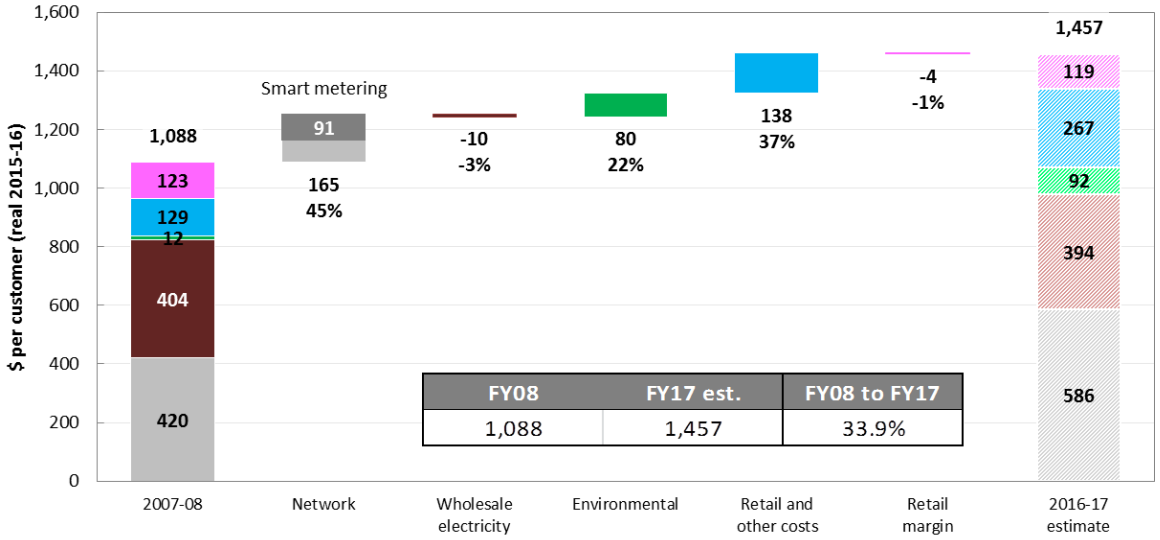
Figure 2.9: Change in average Victorian residential effective prices (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

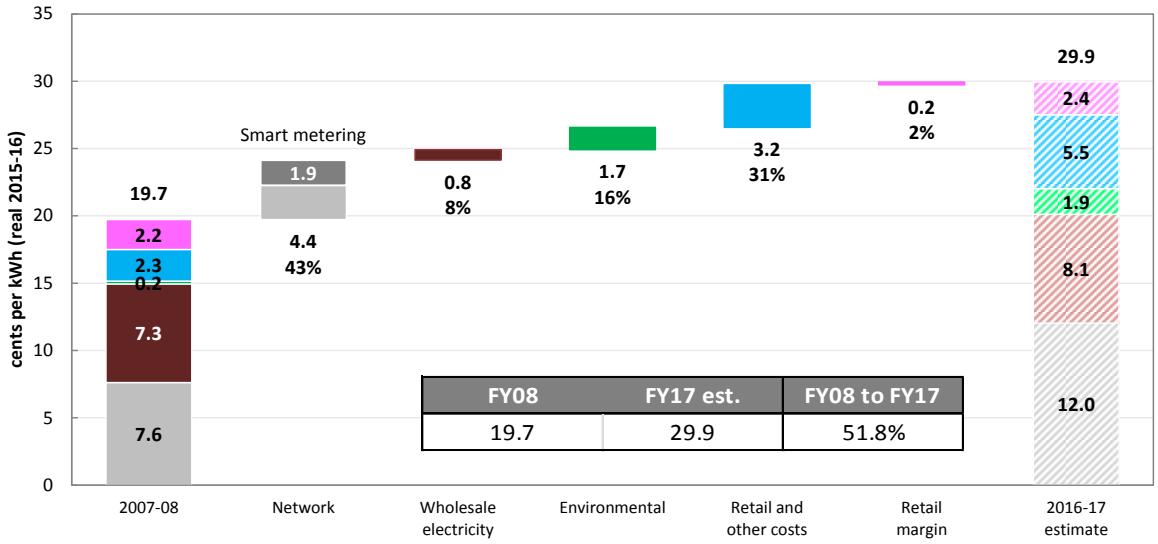
Figure 2.10 and Figure 2.11 are based on ACCC estimated numbers for 2016–17, using the methodology outlined in Box 2.1 on a state basis, as well as the actual data provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.10: Estimated change in average Victorian residential bill per customer from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Figure 2.11: Estimated change in average Victorian residential effective price (c/kWh) from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST

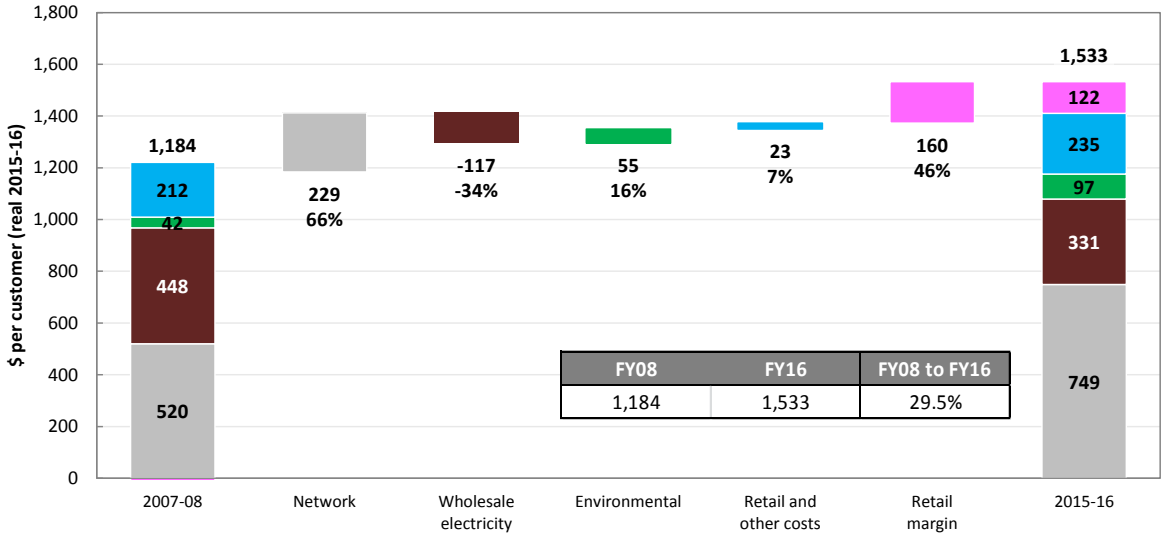


Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

NSW

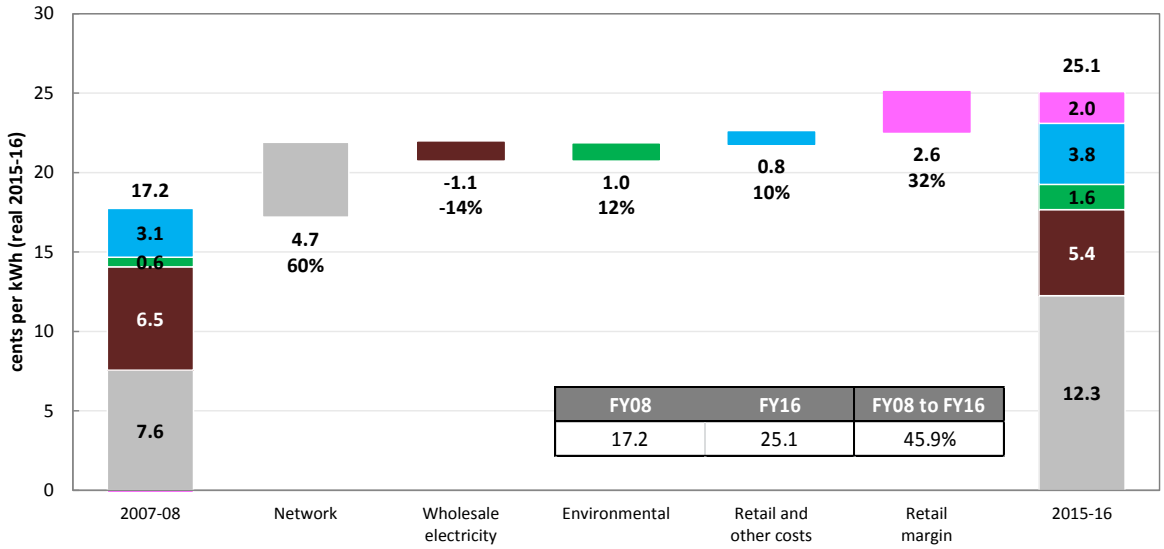
Figure 2.12 and Figure 2.13 are based on actual numbers provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.12: Change in average NSW residential bill per customer from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data. The 2007–08 cost stack includes a retailer margin of negative $38 per customer. Proportions of the increase from 2007–08 to 2015–16 attributable to each cost component may be affected as a result of this figure.

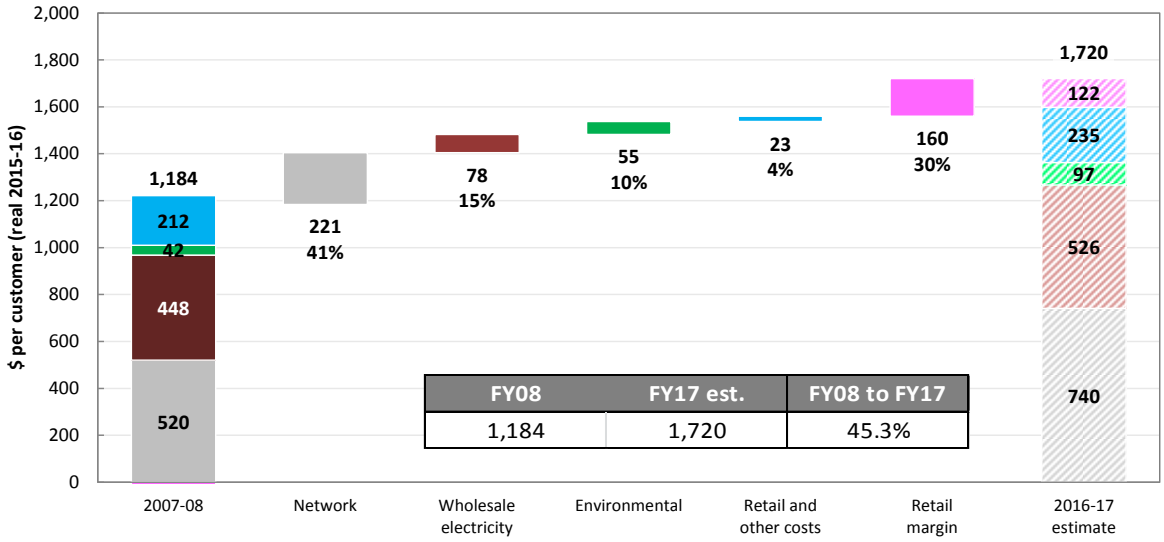
Figure 2.13: Change in average NSW residential effective price (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

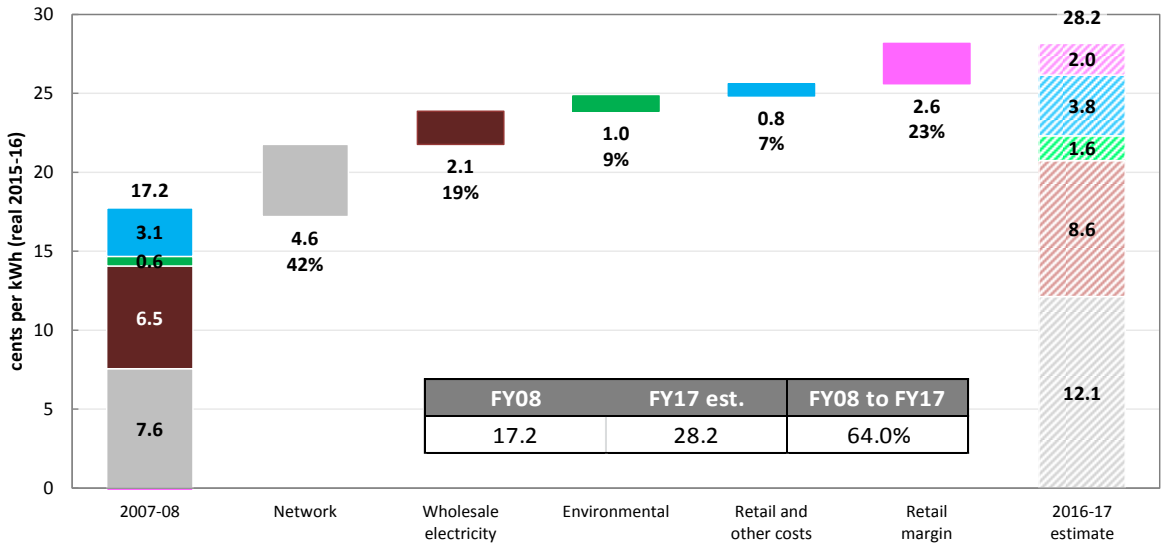
Figure 2.14 and Figure 2.15 are based on ACCC estimated numbers for 2016–17, using the methodology outlined in Box 2.1 on a state basis, as well as the actual data provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.14: Estimated change in average NSW residential bill per customer from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Figure 2.15: Estimates change in average NSW residential effective price (c/kWh) from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST

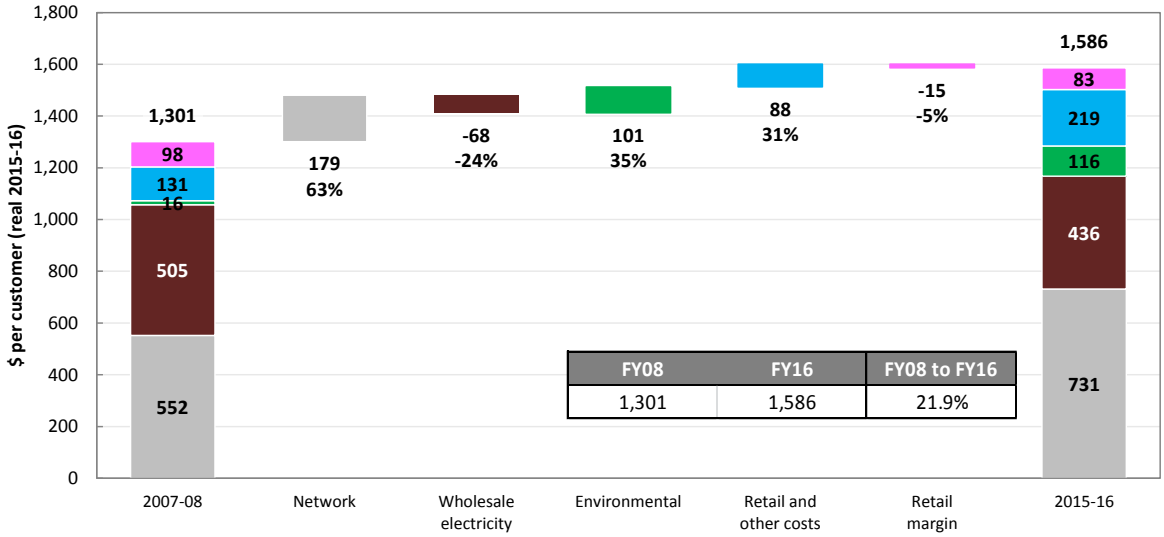


Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

South Australia

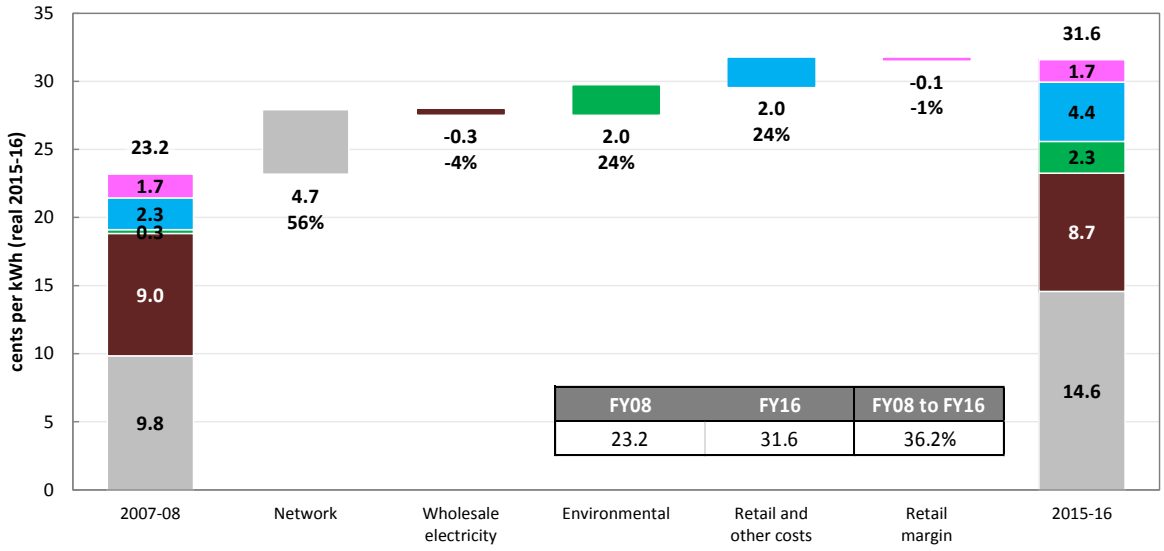
Figure 2.16 and Figure 2.17 are based on actual numbers provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.16: Change in average SA residential bill per customer from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

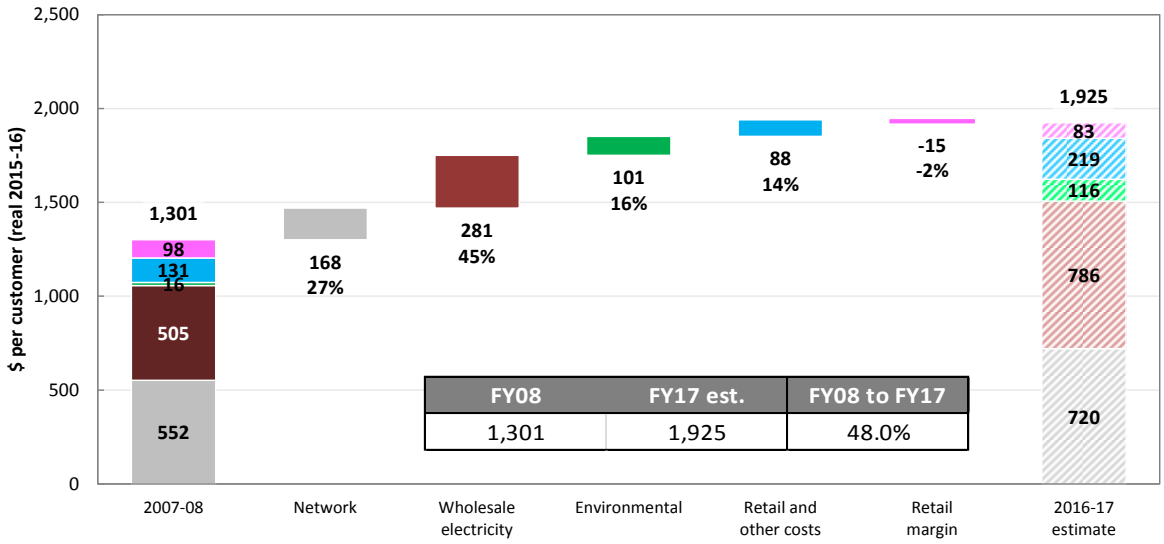
Figure 2.17: Change in average SA residential effective price (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

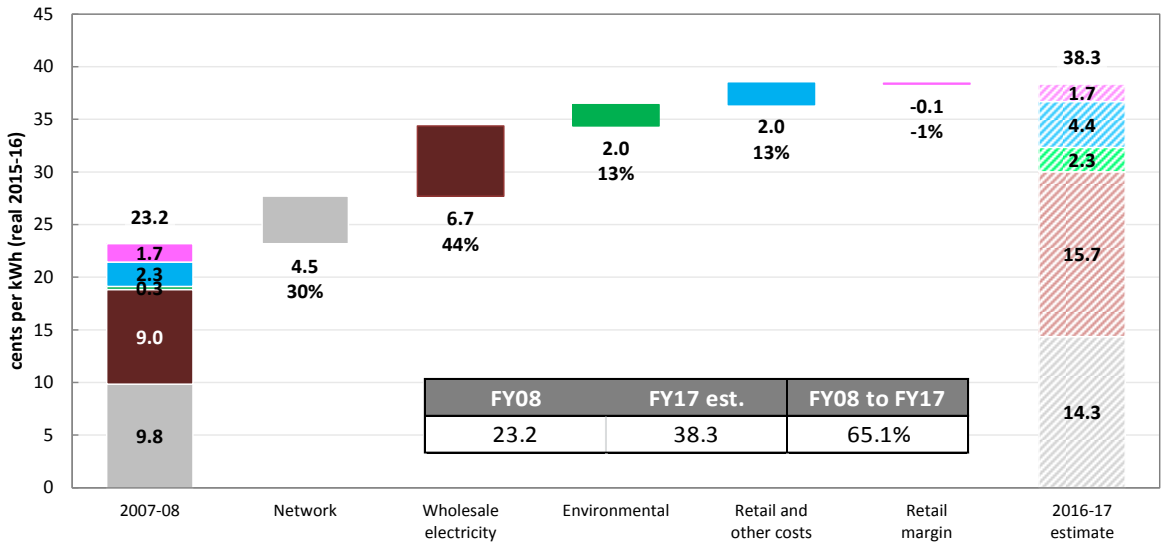
Figure 2.18 and Figure 2.19 are based on ACCC estimated numbers for 2016–17, using the methodology outlined in Box 2.1 on a state basis, as well as the actual data provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.18: Estimated change in average SA residential bill per customer from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Figure 2.19: Estimated change in average SA residential effective price (c/kWh) from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST

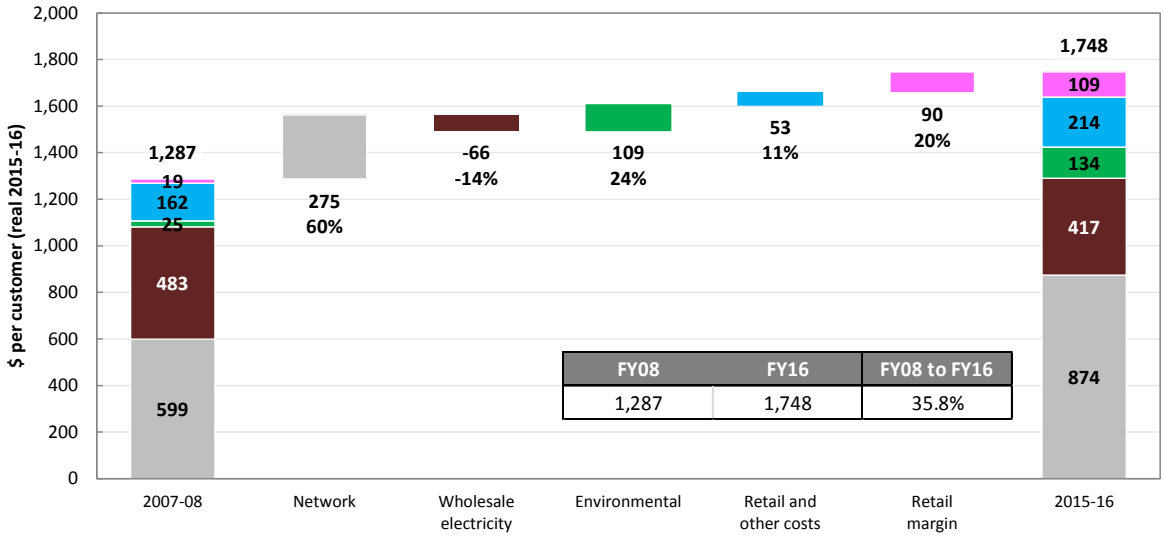


Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Queensland

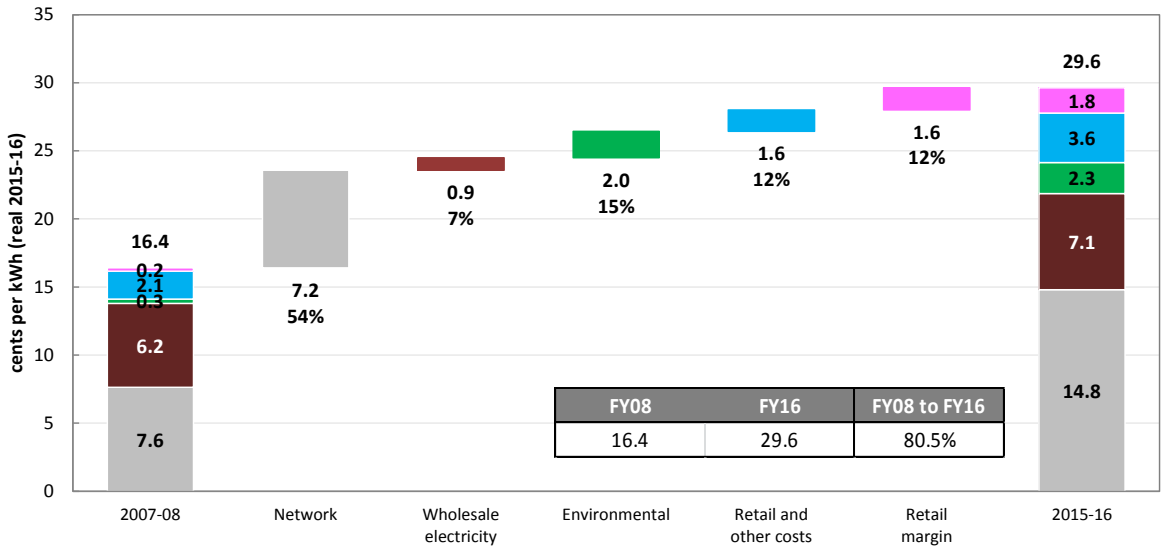
Figure 2.20 and Figure 2.21 are based on actual numbers provided by retailers for the period from 2007–08 to 2015–16. As noted in Box 2.1, references to Queensland only cover competitive regions of Queensland.

Figure 2.20: Change in average Queensland residential bill per customer from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

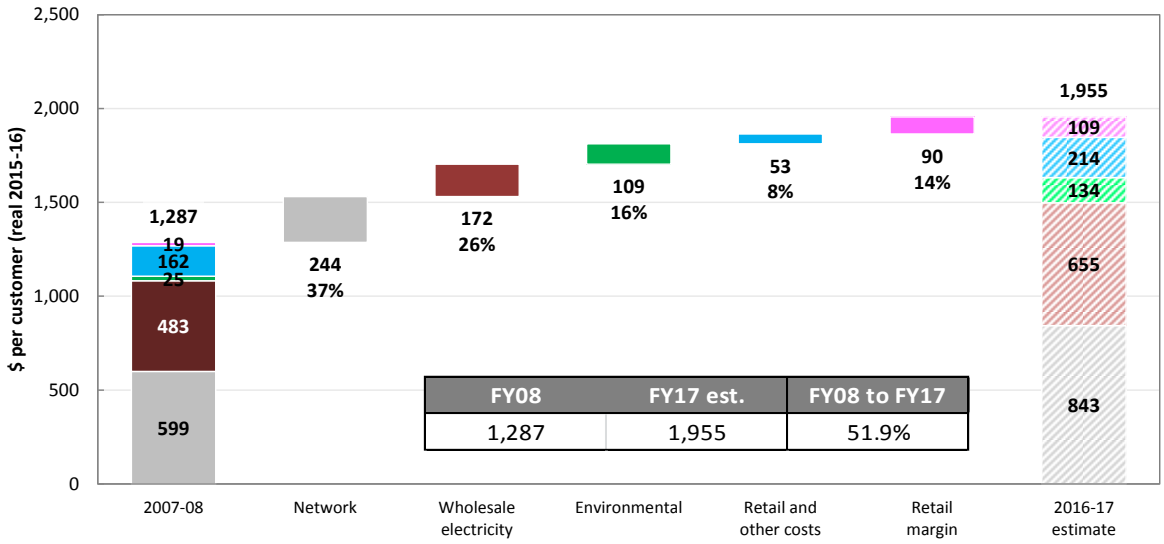
Figure 2.21: Change in average Queensland residential effective price (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

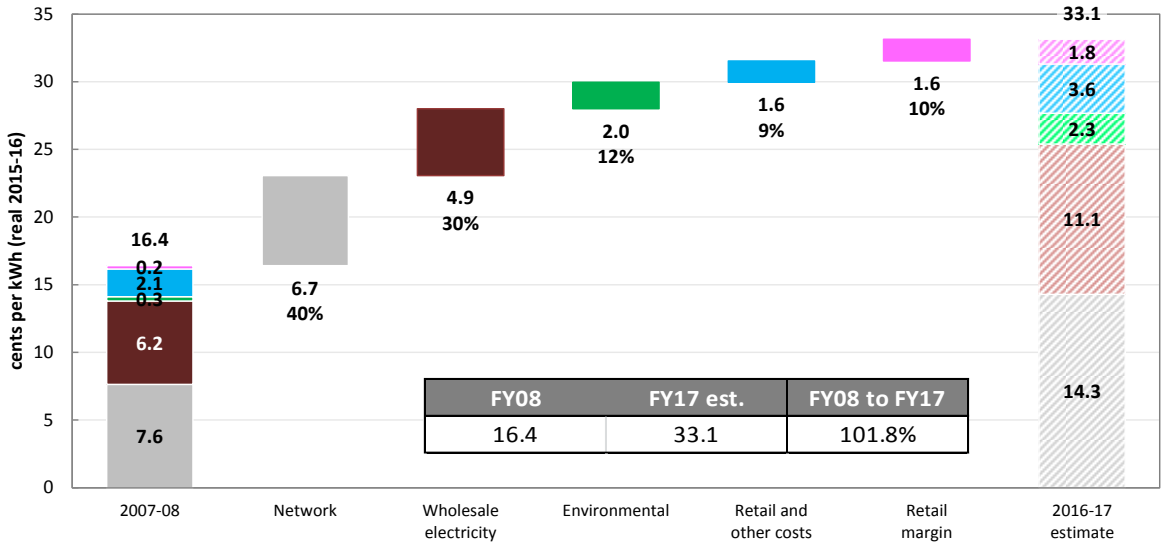
Figure 2.22 and Figure 2.23 are based on ACCC estimated numbers for 2016–17, using the methodology outlined in Box 2.1 on a state basis, as well as the actual data provided by retailers for the period from 2007–08 to 2015–16.

Figure 2.22: Estimated change in average Queensland residential bill per customer from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

Figure 2.23: Estimated change in average Queensland residential effective price from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

2.1.2. Business customers

The ACCC also collected data from retailers about the revenues, costs and profits related to servicing SME customers, and C&I customers.

The ACCC notes that, while most retailers provided data in August and September that relates to SME and C&I customers, the overall data set for these customers is less complete than that for residential customers. As such, the findings set out below should be considered as more preliminary in nature than for residential customers.

As the ACCC receives further information from retailers, it will compile a more complete data set for both SME and C&I customers and report further findings for these customer groups in its final report.

Small and medium enterprise customers

Retailers typically identify SME customers as those with electricity usage of less than 100 MWh per year and who are classified as a SME or commence a small business type plan, although this varies between retailers.

Some of the difficulty in compiling a SME dataset using retailers' own information stems from some retailers not recording costs separately for residential and SME customers. Instead these retailers record information for a combined group, commonly referred to as 'mass market'.

Data received by the ACCC to date generally shows that the proportions of the 2015–16 NEM wide average bill or cost stack for SME customers is similar to that for residential customers (that is, each of the networks, wholesale, environmental and retail components are a similar proportion of the cost stack). Network and wholesale costs make up a slightly larger proportion, while environmental, retail costs and retail margins make up a slightly smaller proportion of total costs. Given the larger usage of SME customers compared to residential, average SME costs are roughly two and half times that for the average residential customer.

Commercial and industrial customers

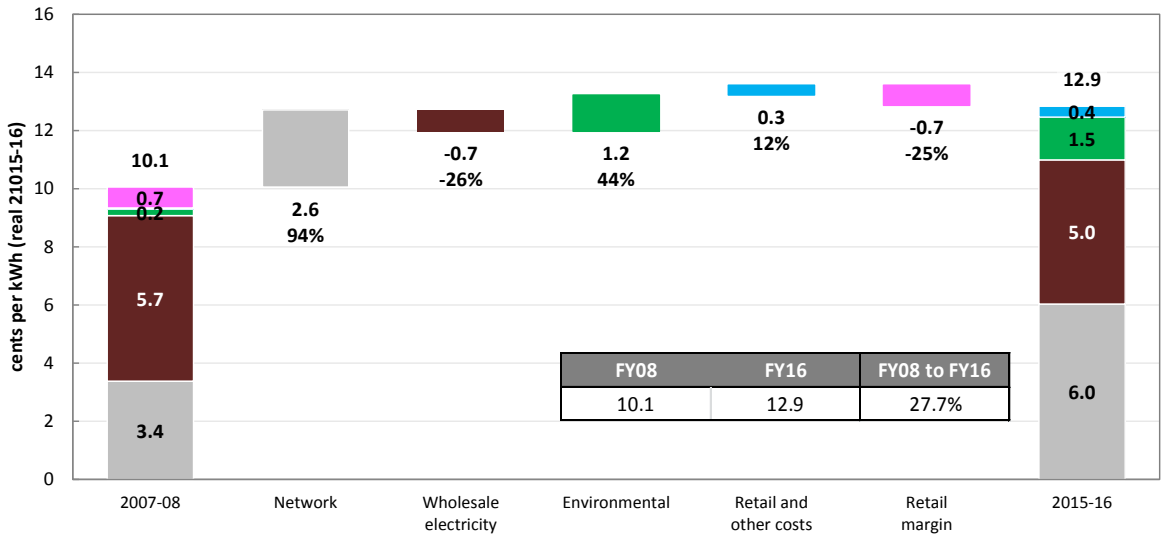
C&I customers are characterised by larger electricity usage, generally more than 100 MWh per year, although some retailers have even higher thresholds for their definition of 'commercial and industrial'. C&I customers can include manufacturers, supermarkets, universities and other large businesses. The contracts for such customers are typically very different to those for residential or SME customers. The data provided to the ACCC demonstrates that there is a large amount of variability across C&I customers in the scale of their usage, meaning that there is no 'typical' C&I customer. For example, one C&I customer may consume over 1000 MWh per year while another may consume less than 300 MWh per year.

Over the period from 2007–08 to 2015–16, the average cost of electricity for C&I customers has increased noticeably across the NEM. Figure 2.24 shows the cost stack for C&I customers on a cents per kWh basis in real terms.

The ACCC considers that a cents per kWh measure gives a more meaningful comparison for C&I customers. Given that a retailer's revenues and costs related to C&I customers can change dramatically as it acquires and loses large C&I customers, basing the cost stack on a usage measure presents a more consistent comparison over time than a per customer measure. As noted above, C&I customers can be very different from one another.

Consistent with the results for residential customers, Figure 2.24 shows that, over the period to 2015–16, network costs have been the main driver of increases in C&I customers' electricity costs. The ACCC notes again that increases in wholesale costs throughout the end of 2016 and 2017 are not captured in Figure 2.24, but the ACCC has estimated these effects in Figure 2.27 below.

Figure 2.24: Change in the average NEM C&I effective price (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST

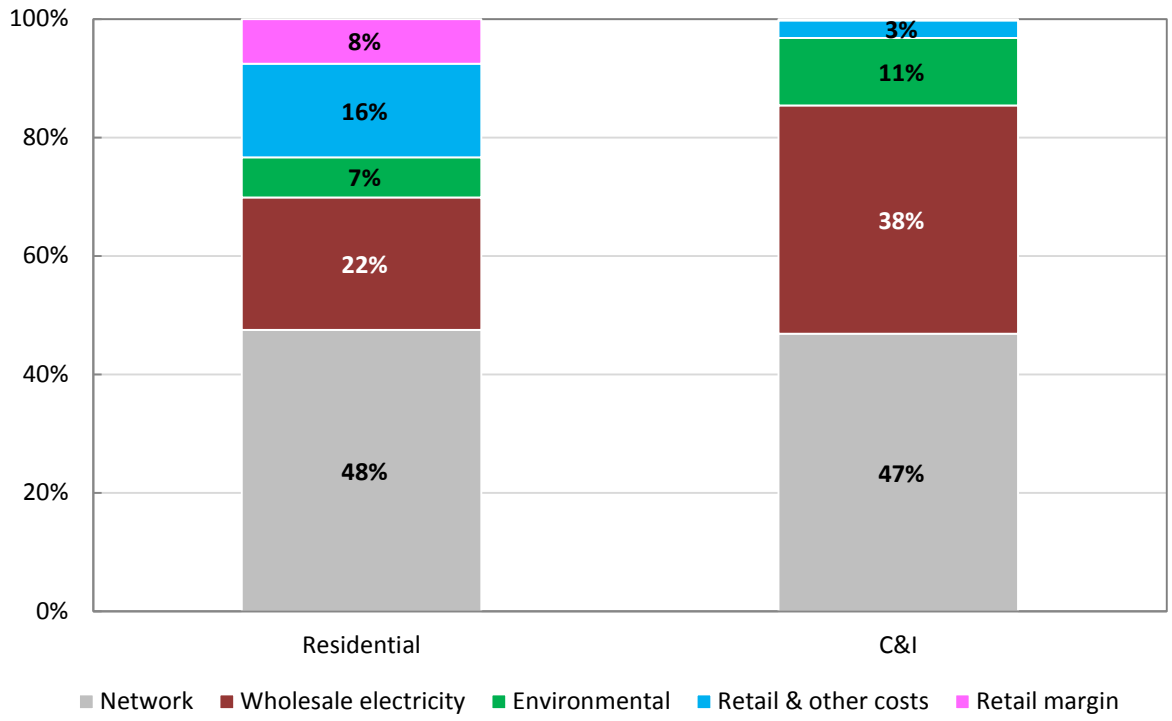


Source: ACCC analysis based on retailers' data. Based on the data, there was a negligible positive retailer margin in 2015–16.

Based on data that the ACCC has collected to date, average NEM wide costs and margins totalled around 13 cents per kWh for C&I customers. On this basis, C&I per kWh costs are lower than for a residential customer which averaged about 28 cents per kWh in 2015–16. This largely reflects lower per unit network costs as well as significantly lower retail costs and margins. As noted, the total charge for C&I customers can vary greatly given the range of contracts available for different businesses.

Figure 2.25 below demonstrates the different cost components related to average residential and C&I customers in 2015–16. The lower retail costs and margins associated with C&I customers matches with retailers' general perception of this customer group being a much lower margin part of the retail business, driven by volumes of energy sold.

Figure 2.25: Cost components for average NEM residential and C&I customers in 2015–16

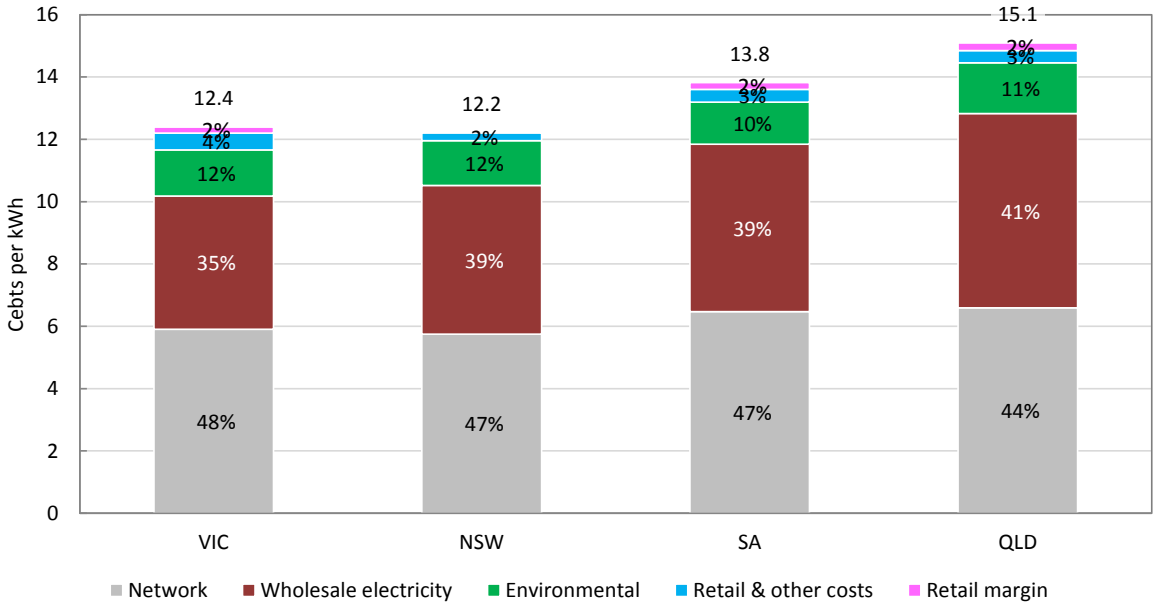


Source: ACCC analysis based on retailers' data.

Figure 2.26 shows C&I cost stacks on a regional basis for 2015–16. In all regions network and wholesale costs together contribute between approximately 85 and 90 per cent of total costs, meaning changes in these components have a strong impact of C&I customers.

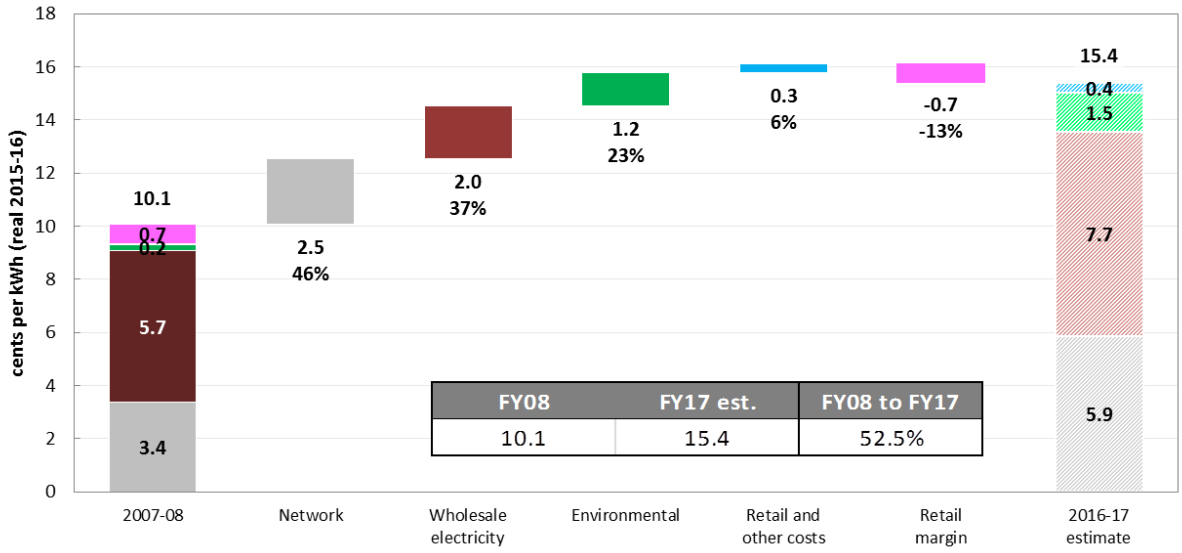
The main difference between C&I cost components in each region is the wholesale cost, which is largest in Queensland, and smallest in Victoria, during the period examined. Similar to the residential cost stacks, Victoria has the largest retail cost component for C&I customers (albeit comparatively much less in percentage terms than for residential customers).

Figure 2.26: Average C&I effective price (c/kWh) by state, 2015–16 excluding GST



Source: ACCC analysis based on retailers' data.

Figure 2.27: Estimated change in average NEM C&I effective price (c/kWh) from 2007–08 to 2016–17, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data; AER wholesale information; network tariff information

2.2. Wholesale

Retailers purchase electricity from generators through the NEM wholesale market at the current spot price, but manage the price risk of the fluctuating spot price through a variety of hedging instruments or vertical integration into generation. The wholesale cost of electricity is the cost that a retailer incurs to purchase electricity from the NEM and manage the associated risk.

Retailers' cost information provided to the ACCC shows that on a NEM-wide basis wholesale costs accounted for around 22 per cent of the retailer cost stack in 2015–16.

2.2.1. Wholesale cost trends

Broadly speaking, total wholesale costs for a retailer will increase as MWh usage increases (although prices can be negative at times as noted below). However, the actual wholesale cost paid by retailers is a product of a number of different factors, including the spot price for electricity, and the approach taken by the retailer to hedging and price risk management (as discussed below in Box 2.5).

While the spot price does not directly determine the wholesale cost faced by retailers, averaged wholesale spot prices do indicate the broad trends in the level of wholesale costs by region. Wholesale spot prices are set every 30 minutes and reflect changing supply and demand factors (the generation capacity made available and the electricity usage by customers).[87] Depending on market conditions, spot prices can range between $14,200 per MWh and –$1000 per MWh (or $14.20 and –$1.00 per kWh).[88]

Figure 2.28 shows annual average wholesale spot prices for each NEM region from June 2000 to June 2017 in real terms. The data demonstrates notable changes at certain times and/or in certain regions, for example, significant increases in South Australia in 2007–08, and across all regions in 2012–13 following the introduction of the carbon price. However, by 2014–15 wholesale prices in Victoria, NSW and SA were similar to levels in the early 2000s in nominal terms and had decreased in real terms. Since 2014–15 there has been an upward trend in wholesale prices across most regions, leading to an increase in the dollar amount that this represents in a retail customer's bill. This has been most prominent in 2016–17. These more recent changes are discussed further in chapter 3.

While Figure 2.28 demonstrates broad trends in the market, these average annual prices can be very different to the actual prices paid day to day on the spot market. The spot price can vary significantly when certain factors, such as the shutdown of a generator limiting supply, the shutdown of an interconnector, or an extreme weather event causing a spike in demand, affect the supply and demand for electricity. Figure 2.29 shows weekly average spot prices in each of the NEM regions from April 2015 to June 2017, and demonstrates the spot price volatility on a week to week basis (but understates the volatility on a daily or half-hourly basis). All regions are exposed to fluctuating wholesale prices, with certain regions experiencing greater volatility than others.

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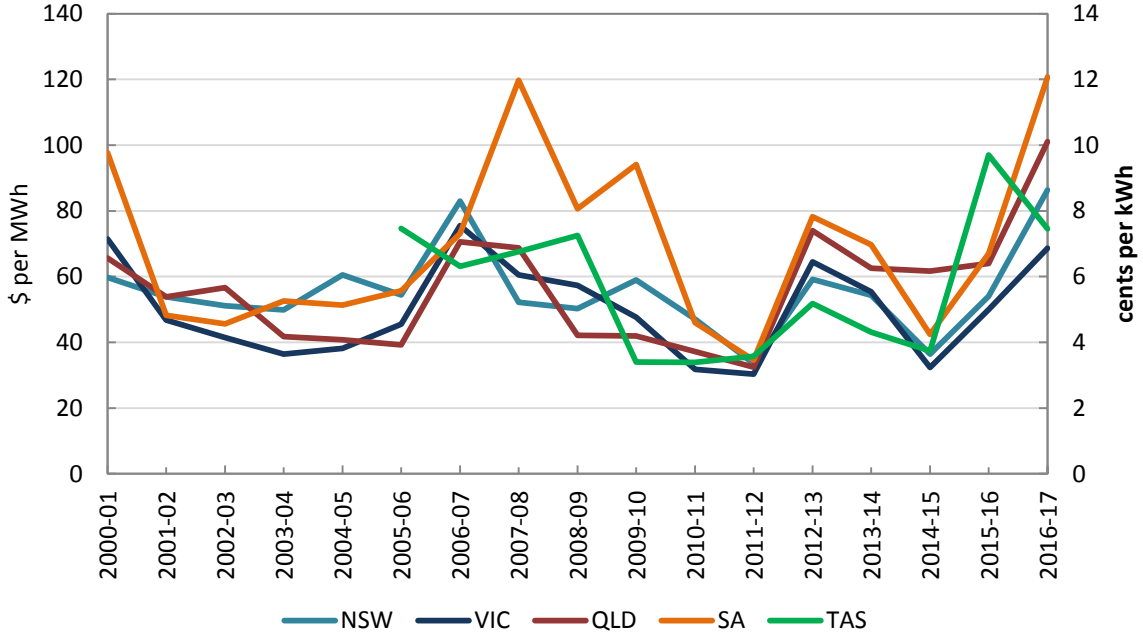
87 The current arrangement is that a dispatch price is determined for each five-minute dispatch interval, and the settlement price is the time weighted average of the six dispatch prices occurring during the thirty minute trading internal. The AEMC is currently working on a rule change that proposes to align dispatch and settlement at five minutes. See: AEMC, *Draft rule determination – National Electricity Amendment (Five Minute Settlement) Rule 2017*, 5 September 2017.

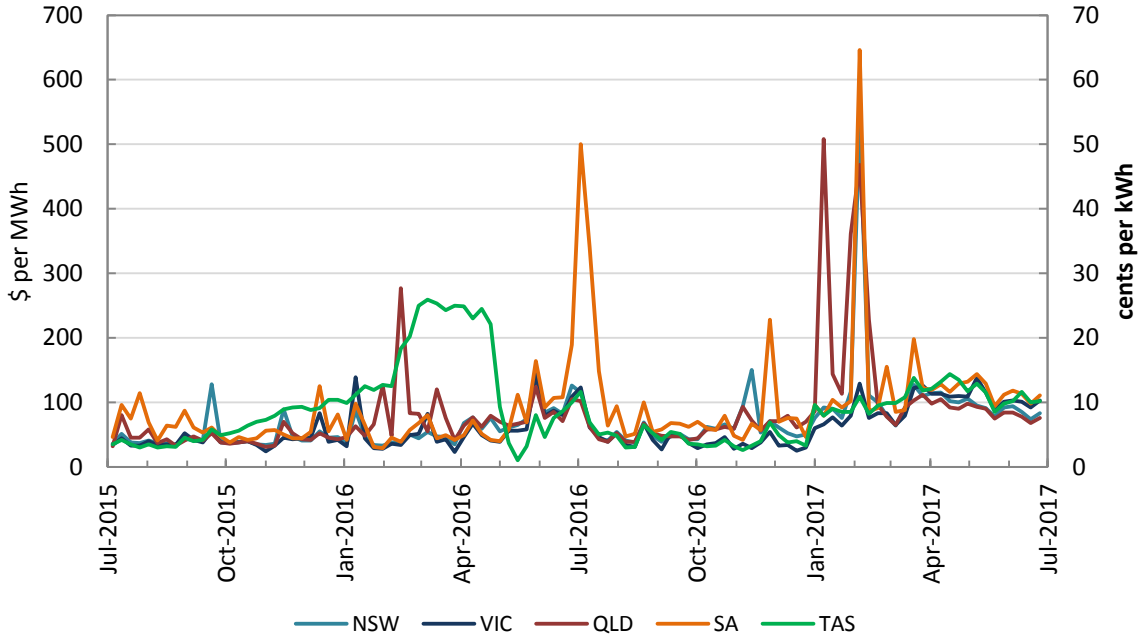
88 Generators may bid negative prices to ensure dispatch when there would be significant costs to shut down or decrease generation (e.g. for baseload coal-fired generators that have large restart costs and lead time), or where they may be able to generate profitably despite a negative spot price (e.g. for renewable generators that receive renewable energy certificates in addition to the spot price for their output).

Figure 2.28: Annual volume weighted average spot electricity prices from June 2000 to June 2017, real values in 2015–16 dollars



Source: AER wholesale statistics, https://www.aer.gov.au/wholesale-markets/wholesale-statistics

Figure 2.29: Weekly volume weighted average spot prices from April 2015 to April 2017, nominal values



Source: AER wholesale statistics, https://www.aer.gov.au/wholesale-markets/wholesale-statistics

Box 2.5: Hedging and price risk management

A specific retailer's wholesale costs, either in total or for a particular region, will be different from the actual spot prices in the NEM.

Given the volatility of spot prices, if an electricity retailer relied solely on purchasing electricity at the spot price it would risk having to pay very high prices at certain times. These costs would not be able to be passed on to retail customers who generally pay fixed prices per unit of electricity over longer periods (of up to 12 months) before there is a change in the retail price charged.[89]

This discrepancy between wholesale spot and retail pricing could leave the retailer with significant unrecoverable costs in the short to medium term, potentially leading to insolvency.

Retailers manage this wholesale price risk by:

- Entering into financial 'hedge' contracts to manage the net costs for electricity that they intend to buy in the future, including swap and cap contracts for base and peak loads. Certain options are also available to assist to manage exposure during, for instance, extreme weather events.[90] Trading of electricity hedge contracts can occur either over-the-counter (**OTC**) or on the Australian Securities Exchange (**ASX**).[91]
- Integrating their business across both generation and retailing electricity (retailers who do this are referred to as 'gentailers').

In practice, most gentailers use a mix of integration and hedge strategies, and also purchase some electricity at the spot price at certain times. Retailers with no generation assets tend to rely much more heavily on hedging through the contract market, as well as some spot purchases. The approach taken will vary by retailer and across regions. In many cases, retailers without generation assets will be purchasing hedging products from the wholesale arms of gentailer competitors.

A retailer's wholesale cost may therefore be made up of payments based on either the spot price, prices under financial hedging contracts and/or internal adjustments (or transfer prices) made within integrated gentailer businesses.

Limited information regarding retailers' wholesale payments is publicly reported.[92] OTC contracts are confidential between the parties, and transfer prices are generally not reported.[93] However, pricing of certain ASX traded futures contracts is publicly available. Figure 2.30 sets out prices for a base load futures contract for the entire 2017–18 year over time, showing how the prices for this contract increased in late 2016 and early 2017. For example, between July 2016 and March 2017, the price for a contract for the 2017–18 year in Queensland rose from around 6 cents per kWh to over 10 cents per kWh.

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89 More recently, certain retailers have begun employing a degree of time-variant pricing whereby rebates are offered to customers who reduce electricity usage at peak times (see Box 3.3 in chapter 3 below).

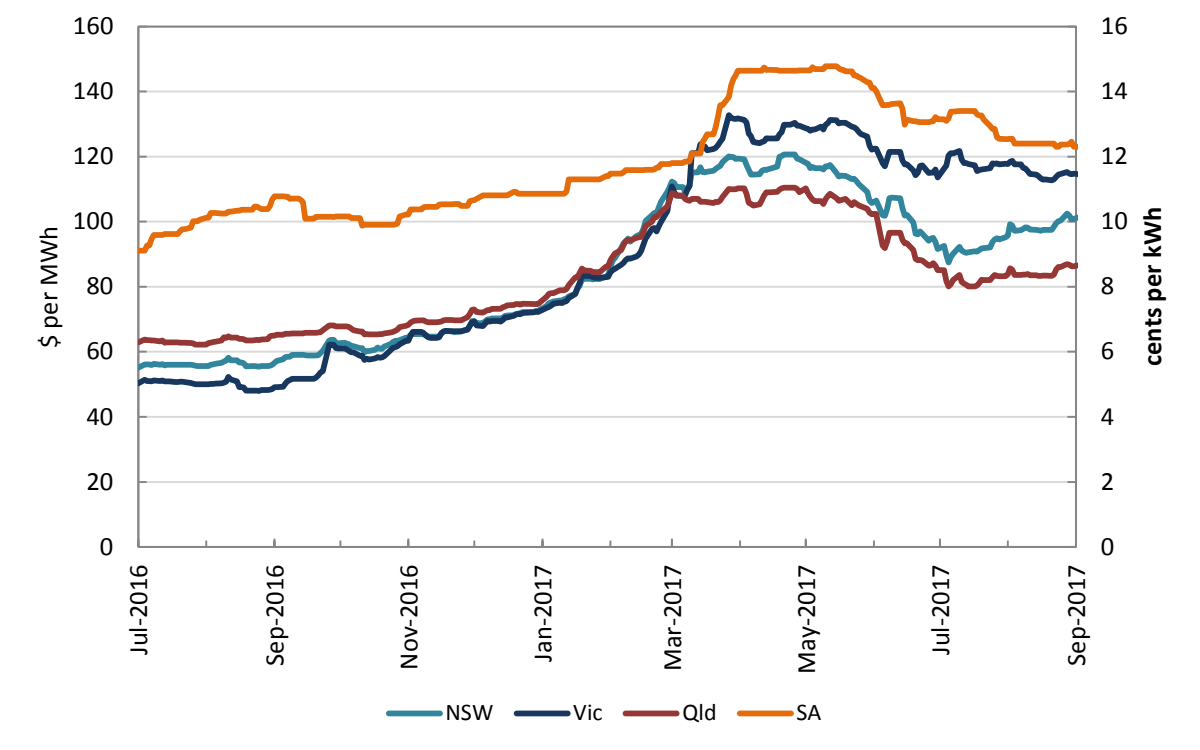
90 Productivity Commission, *Electricity Networks Regulatory Framework, Productivity Commission Inquiry Report, Volume 2,* 9 April 2013, Appendix C: Hedging in the electricity market, pp. 2, 3.

91 AER, 2017 State of the energy market, p. 59

92 AEMC, 2017 Retail Energy Competition Review, pp. 307, 308.

93 The Australian Financial Markets Association previously reported data on OTC markets through voluntary surveys of market participants however the surveys discontinued in 2015–16 following difficulties with the survey method.

Figure 2.30: Electricity base futures prices for 2017–18



Source: Analysis based on ASX Energy data

The degree to which the futures prices shown in Figure 2.30 will reflect a given retailer's actual wholesale cost depends on their particular approach to hedging and level of risk exposure. Further, as Figure 2.30 illustrates, the timing of when a retailer enters into hedging instruments will itself have an effect on the cost. However, the futures prices clearly demonstrate higher expected wholesale costs in more recent times, consistent with the trend observed in spot prices in Figure 2.28 above.

The ACCC may examine hedging practices further in its final report.

2.2.2. Observations about wholesale costs from retailer data

The public market data discussed above provides an indication of the general trends in the wholesale market, but as noted, the actual costs incurred will be determined by a given retailer's approach to risk and hedging. By seeking data from retailers as to their wholesale costs, the ACCC has obtained some insight into the actual costs of purchasing energy in the wholesale market.[94]

As noted in Figure 2.1, the ACCC's analysis of information provided by retailers shows that wholesale costs across the NEM accounted for around 22 per cent of the average residential customer bill in 2015–16.

In 2007–08 the wholesale component accounted for around 37 per cent of total costs and margins across the NEM, a much higher proportion of overall bills. The decrease in the contribution of wholesale costs between the two periods is driven by the increased contribution of other components of the cost stack (discussed below), decreased energy usage and the slight decrease in NEM-wide wholesale charges in real terms.

[94] In the case of gentailers, these reported costs are clearly influenced by the gentailers' approach to setting their internal transfer price. The ACCC will be examining approaches to transfer pricing further in its final report.

However, the ACCC analysis of retailers' data does not include 2016–17, which saw significant increases in wholesale prices. This increase was primarily due to a tighter demand-supply balance from several generation units coming offline as well as higher gas prices affecting some generators. These more recent impacts on wholesale prices are discussed in chapter 3.

The wholesale cost contribution varies across regions, as presented in Figure 2.7. Wholesale costs contributed around 21 per cent of total costs and margins in Victoria, and almost 28 per cent in South Australia in 2015–16.

Figure 2.31 presents average wholesale costs in cents per kWh on a regional basis. It shows that these costs of a unit of energy have overall slightly decreased between 2007–08 and 2015–16 in real terms.

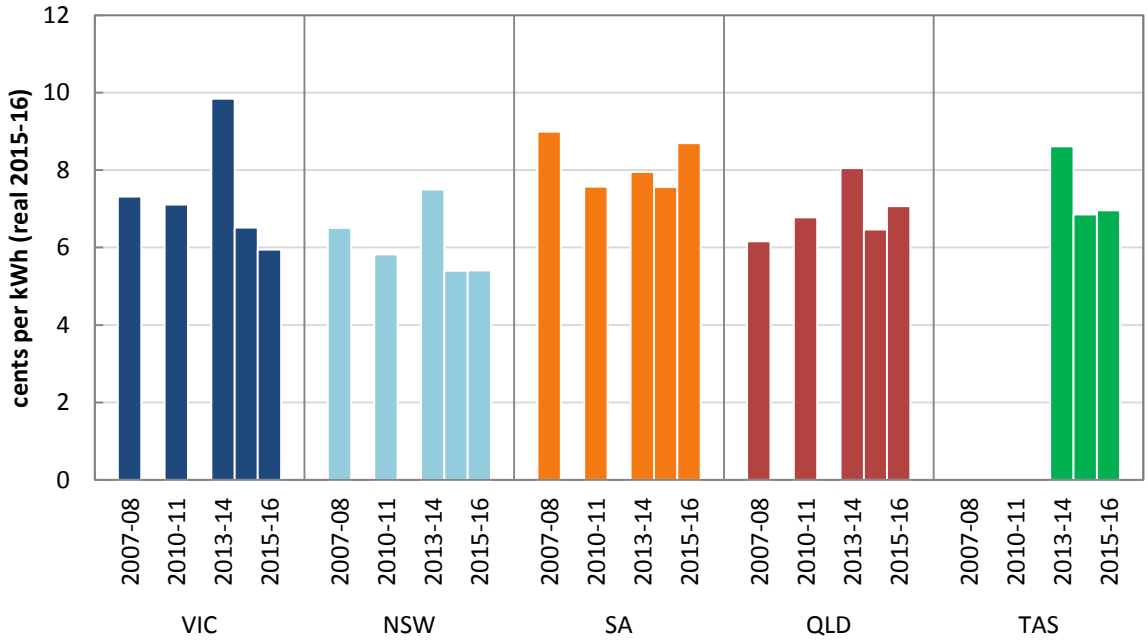
In Victoria and NSW wholesale costs were slightly lower in 2015–16 than they were in 2007–08. Wholesale costs in South Australia were higher than all other regions in 2007–08 and were also the highest in 2015–16 at almost 9 cents per kWh. In 2007–08 there were a number of high spot price events in South Australia, including due to high temperatures and record demand.[95] Other factors in South Australia make the wholesale market more prone to volatile prices, including relatively larger shares of gas powered and renewable generation as well as concentration in generator ownership and in particular, the market position held by AGL and less liquidity in the contract market. Chapter 3 explores in further detail why South Australian wholesale prices are the highest in the NEM.

The increase in wholesale costs shown in retailers' data across most regions in 2013–14 is largely due to the carbon price in place during that time where increases in generation costs where recovered through higher wholesale prices. In the subsequent year, after repeal of the carbon price on 1 July 2014, wholesale costs were generally lower.

While not evident in the aggregated data, in Figure 2.31 the ACCC's analysis based on retailer data also suggests that the actual cost of wholesale electricity can vary significantly by retailer.

[95] AER, *State of the Energy Market 2008*, 20 November 2008, p. 88.

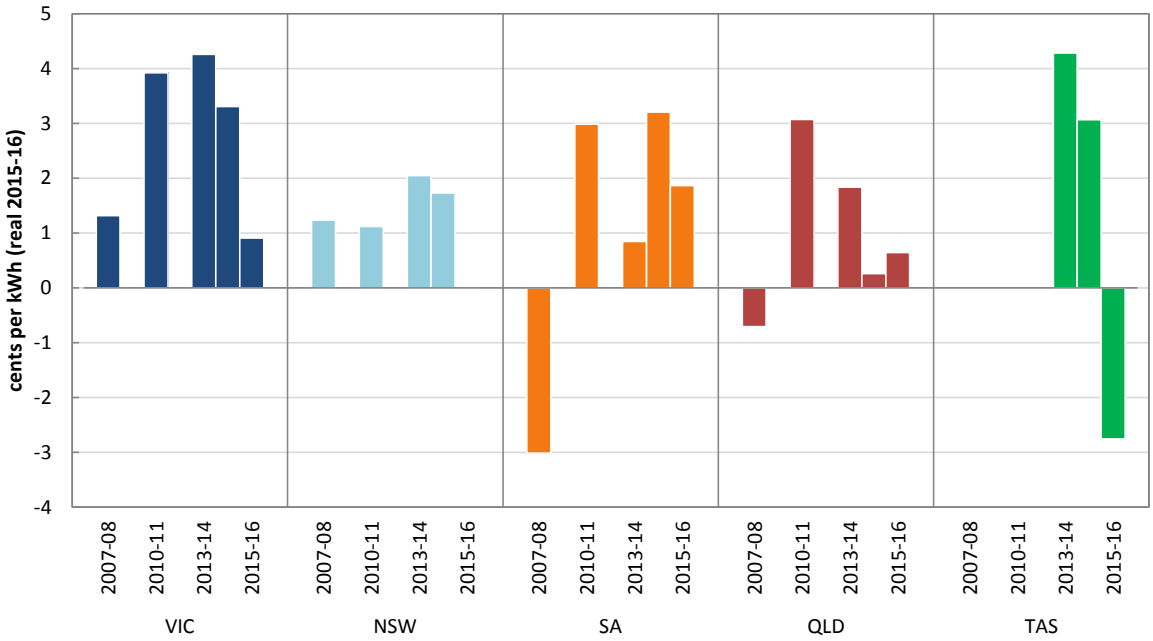
Figure 2.31: Average wholesale cost of electricity by region, real values in 2015–16 dollars



Source: ACCC analysis based on retailers' data.

Figure 2.32 sets out the differential between average wholesale costs from the data provided by retailers, compared to the average annual AEMO spot price in each region, for 2007–08 to 2015–16.

Figure 2.32: Differential between average wholesale cost and average annual volume weighted spot prices by region, real values in 2015–16 dollars



Source: ACCC analysis based on retailers' data, AER data, AEMO data.

Figure 2.32 shows that average wholesale costs provided by retailers are usually higher than average annual spot prices, although the difference varies for certain regions and certain

years. As set out earlier, a retailer's wholesale cost is affected by the strategies it implements to manage spot price risk.

As outlined below in Box 2.6, other studies have generally considered wholesale costs as a combination of the spot price for electricity plus a premium to cover risk management activities. The ACCC's data from retailers suggests that this is often an appropriate assumption but that it may depend on the particular year, region and retailer. The ACCC's data suggests that the amount of uplift can vary significantly between years.

There are some instances where average wholesale costs are very close to average spot prices. For instance, in some regions for particular years average wholesale costs are within 1 cent per kWh of average spot prices.

The instances where wholesale costs are lower than the average spot prices may reflect a situation where high price outcomes were not forecast by the market and so the higher spot prices were not reflected in the prices of hedging products held by retailers for that period. The relatively higher costs in the more recent period in most regions may reflect difficulties in managing risk and liquidity issues in the contract market.

The ACCC is continuing to examine wholesale cost information provided by retailers and intends to consider these costs in greater detail in the next phase of the Inquiry, including the various types of wholesale costs incurred by different retailers.

Box 2.6: Public estimates of wholesale costs in other reports

A number of studies have estimated electricity wholesale costs. While all slightly different, most of these studies model the costs of hedging, and then add this cost component to averaged spot prices. Their wholesale cost estimates also include other market fee and ancillary services costs and adjust for network losses. Due to differences in approach and the assumptions made, studies on comparable time periods and NEM regions have tended to give somewhat different results. The following table summarises results from a number of these studies.

Table 2.1: Summary of wholesale cost estimates

Study **Time period analysed**	**Cost of hedging approach/premium**	**Wholesale proportion of retail bill**
AEMC *2016*	5 per cent uplift on spot prices	34 per cent of residential bills on a NEM-wide basis in 2016.[96]
Grattan Institute (Victoria) *2011 to 2014*	$15 per MWh premium on spot prices	Approximately 15 per cent of an average Victorian residential bill in 2014.[97]
Independent review into the Electricity & Gas retail markets in Victoria *2006 to 2017*	Between $10 and $20 per MWh premium on average spot prices for most of the period.[98]	Approximately 18 per cent of the average bill based on residential offers in May 2017. [99]
ICRC (ACT) *2014–15 to 2017–18*	Uplift factor applied to the forward price.	Wholesale costs represented between 26 and 33 per cent of total costs and margins from 2014–15 to 2017–18.[100]
IPART (NSW) *2013–14*		Energy cost component made up around 22 per cent of a typical residential customer's bill in NSW.[101]

96 AEMC, 2017 Retail Energy Competition Review, p. 304.

97 Grattan Institute, March 2017, figure 2.2, p. 16.

98 Jacobs, *Retail price review – A report for the Department of Environment, Land, Water and Planning: Final report*, 11 August 2017, p. 45.

99 Thwaites, Faulkner and Mulder, August 2017, p. 11.

100 ICRC, *Final report: Standing offer prices for the supply of electricity to small customers from 1 July 2017*, June 2017, p. xii; ICRC, *Final decision: Retail electricity price recalibration 2016–17, Standing offer prices for the supply of electricity to small customers*, June 2016, p. 25; *ICRC, Final decision: Retail electricity price recalibration 2015–16, Standing offer prices for the supply of electricity to small customers*, June 2015, p. 27 ICRC, *Final report: Standing offer prices for the supply of electricity to small customers, 1 July 2014 to 30 June 2017*, June 2014, p. xiii.

101 IPART, *Review of regulated retail prices and charges for electricity - From 1 July 2013 to 30 June 2016: Final Report*, June 2013, p. 18.

2.3. Networks

Electricity networks are used to transport electricity from producers to energy customers. Transmission networks transport power at high voltages from generators to major demand centres. Distribution networks transport electricity from transmission networks to energy customers. Electricity is stepped down to lower voltages in a distribution network and carried in wires over poles to businesses and homes.

The costs of using these electricity networks are the largest component of retailers' costs in supplying electricity to consumers. Retailers' cost information provided to the ACCC shows that on a NEM-wide basis network costs accounted for 48 per cent of the retailer cost stack in 2015–16.

There are five state based transmission networks in the NEM and 13 major distribution networks. The ACT, South Australia and Tasmania each have one major distribution network. Queensland, NSW and Victoria each have multiple distribution networks.

The prices for transmission and distribution are unavoidable costs that a retailer must incur to get electricity from generators to its end user retail customers. The charges for these networks are set by the AER using a revenue cap process that determines the overall revenue that a network is able to recover each year, based on a level of return on the regulatory asset base (**RAB**), an allowance for depreciation, operating costs and tax. The revenue cap approach also means that network charges may increase as utilisation decreases.

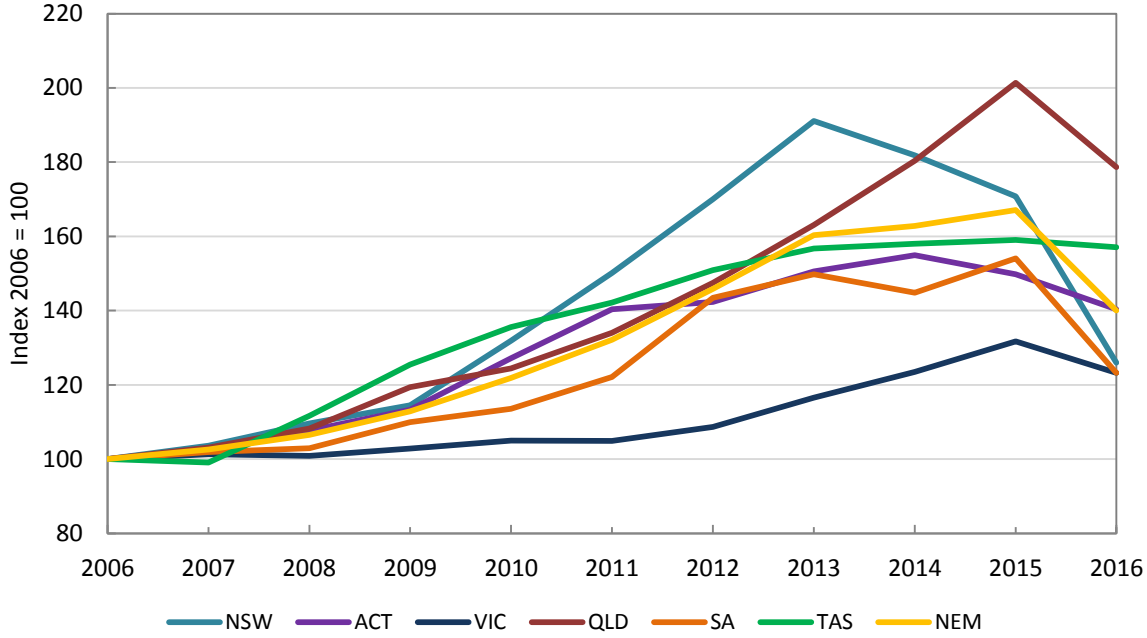
Network charges have increased across the NEM over the past ten years. However, network tariff structures have meant that not all customers have paid increases in costs equally.

The following discussion focuses on the changes in network costs over time, while the reasons for such changes are discussed further in chapter 3.

2.3.1. Network cost trends

Network charges have increased significantly in real terms across the NEM, particularly from 2009. But revenue growth has not been the same across the NEM. Figure 2.33 below shows an index of network revenue in real terms for each state in the NEM relative to revenue in 2006. Revenue increased the most in Queensland and NSW, peaking respectively at 200 per cent (in 2015) and 190 per cent (in 2013) relative to 2006 revenues. Meanwhile, Victorian networks experienced much lower revenue growth, peaking in 2015 at 130 per cent of 2006 revenues. While network revenues have generally decreased since 2014 following the most recent AER decisions, these are being contested in most regions and revenue may increase in future after the merits review processes. This may mean that the downward trend in later years in Figure 2.33 is reversed in future.

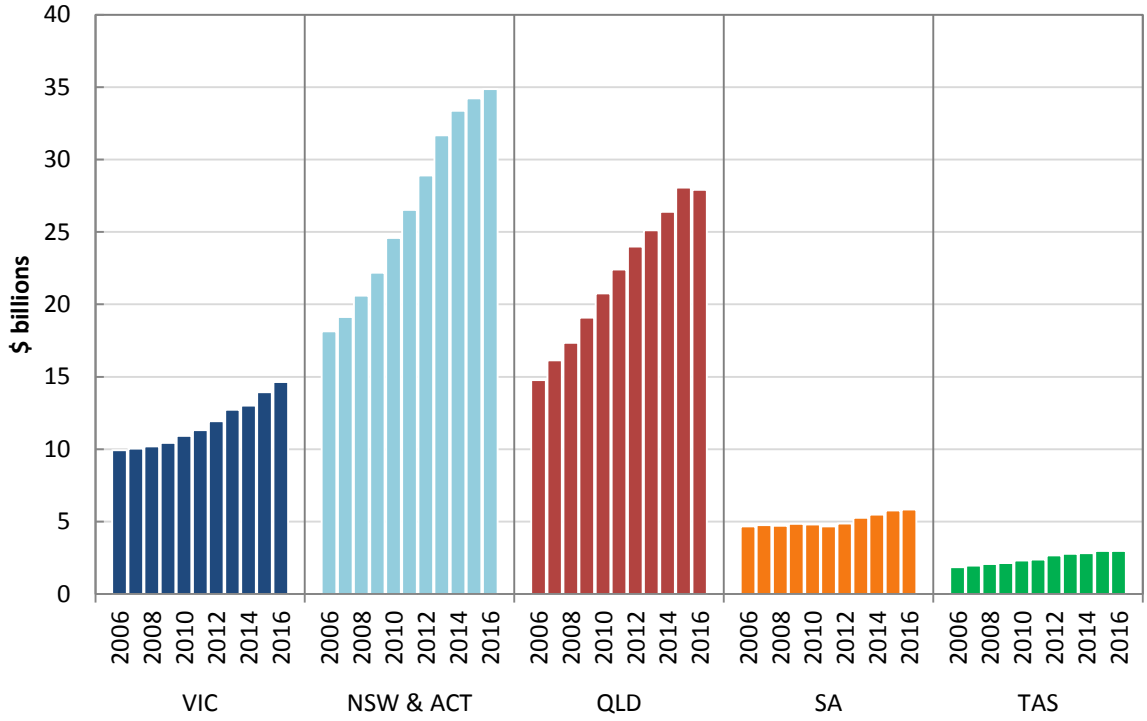
Figure 2.33: Index of revenue changes from 2006 to 2016 by state in real terms (index base year 2006)



Source: AER economic benchmarking, Regulatory Information Notice responses.

Key components of the cost that determine the amount of revenue that network operators are allowed to recover have increased significantly since 2006. The total RAB of the NEM (the value of the assets that the networks can receive a return on) increased in real terms by 75 per cent from $49 billion in 2006 to $86 billion in 2016 (in 2016 dollars). Figure 2.34 shows the increase in RAB over time for each NEM region.

Figure 2.34: Regulatory Asset Base from 2006 to 2016, by NEM region, real values in 2015–16 dollars



Source: AER economic benchmarking, Regulatory Information Notice responses.

These large investments occurred during a time of instability in financial markets which increased financing costs, resulting in high revenue growth across the NEM.[102] Similarly, operating expenditure in 2014 was 43 per cent higher than it was in 2006. However, since 2014, operating expenditure has been declining and in 2016 was only 27 per cent higher than 2006 levels. The return on capital and operating expenditure are the two largest components of revenue and respectively account for over 50 per cent and 25 per cent of network revenue across the NEM.[103]

From 2008, network costs increased to replace ageing assets, meet stricter reliability and bushfire safety standards, and responding to forecasts made at the time of rising peak demand. These issues are discussed in greater detail in chapter 3 of this report.

[102] AER, 2017 State of the energy market, p. 107.

[103] Ibid, p. 103.

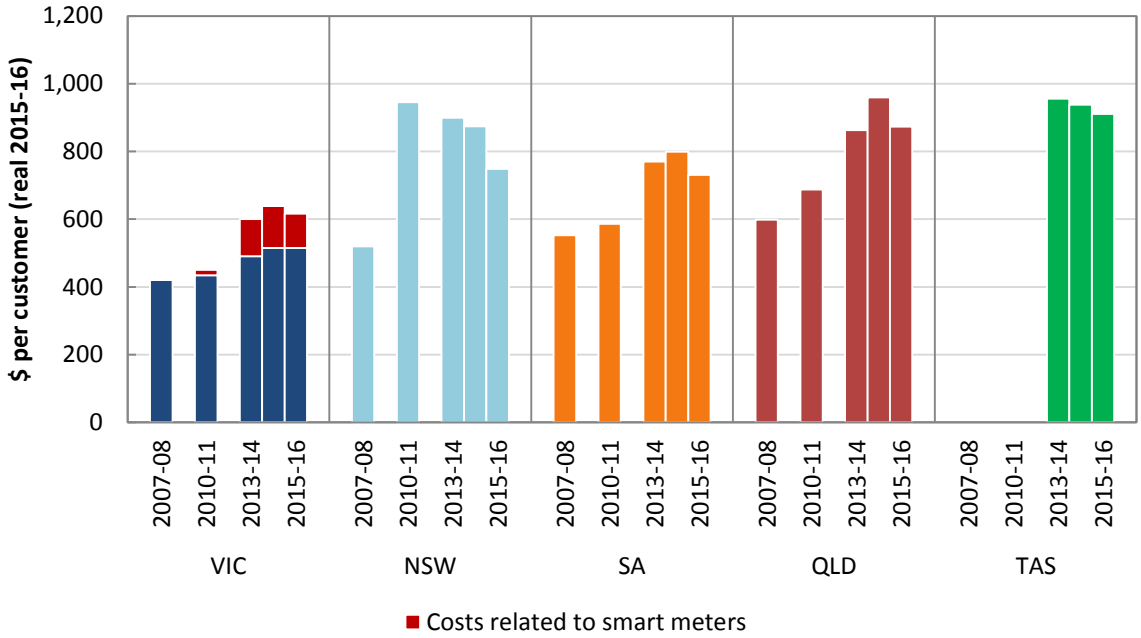
2.3.2. Observations about network costs from retailer data

Our analysis shows that network costs account for 48 per cent of residential bills in 2015–16. This is broadly consistent with recent NEM wide analysis from AEMC, Grattan Institute and St Vincent De Paul Society.[104]

Using the retailers' data provides the benefit of capturing the network costs incurred over the full range of customers that a retailer services. Other studies typically have to assume a single specific tariff and load profile for a representative customer.

Figure 2.35 shows average network costs for each region. To allow for a better comparison of underlying network costs, we have separated out costs associated with the Victorian Government mandated rollout of advanced metering infrastructure (which are separately accounted for in the graph below),[105] and all jurisdictional premium feed-in tariff schemes (which are accounted for in environmental costs).[106]

Figure 2.35: Average network costs per customer, by state, real values in 2015–16 dollars



Source: ACCC analysis based on retailers' data.

Figure 2.35 shows that network costs have increased since 2007–08, peaking in 2014–15 before a slight decrease in 2015–16. This broadly matches the revenue index shown in Figure 2.33 which shows that network revenue has increased over time until 2015. The decrease in 2015–16 follows the most recent round of AER determinations which forecast revenues to fall by an average of 13.5 per cent.[107]

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104 AEMC, 2017 Retail Energy Competition Review, p. 304; St Vincent de Paul Society, December 2016, p. 18; Grattan Institute, March 2017, p. 9.

105 Victorian distribution networks recovered the costs of installing new metering infrastructure through increased network charges.

106 Each state, except for Tasmania, has recovered the cost of jurisdictional feed-in tariffs through increased network costs. However, these costs are not cost associated with running the network and we have attributed costs associated with feed-in tariffs as environmental costs.

107 AER, 2017 State of the energy market, p. 107

As noted above, network operators in NSW, the ACT, Victoria and South Australia sought review on elements of the AER's determinations as part of the limited merits review process. Depending on the outcome of these reviews, networks could potentially increase network tariffs which may offset the recent decreases in network revenue. That is, some of that 13.5 per cent decrease could be found to be incorrect and have to be recovered from retailers, and hence retail customers, in later periods. We discuss the impact of limited merits review on network revenue in chapter 3.

State differences

A driver of the differences in electricity prices across geographic areas is the variation in network costs by distribution network supply area.

Since 2007–08, network costs per customer have increased in all states. However, these increases have occurred at different times. NSW experienced a significant increase in 2009–10 and network costs remained high until 2014–15 when they began to decrease. Meanwhile, Queensland and South Australian customers experienced a continuous increase in network costs from 2007–08 to 2014–15. This means that NSW customers have paid high network costs for a number of years relative to the other states.

In Victoria, the rollout of mandatory smart meters as part of the Victorian Government's advanced metering initiative, which commenced in 2009, was a main driver of Victorian network cost increases.[108]

We note that we cannot use costs per customer to directly compare the efficiency of networks in each state. This is because energy usage varies by network. For example, based on retailer data, Tasmanian customers, the highest average electricity users, consume at least 40 per cent more electricity than average Victorian customers, who consume the least amount of electricity.[109]

We discuss the drivers of network costs over the past ten years in more detail in chapter 3.

Are network costs a pass through?

The AER publishes network tariffs for each distribution network each year. Unlike wholesale electricity costs, which require the retailer to hedge to reduce price variations, the retailers know network tariffs in advance and can factor the changes in network tariffs in the retailer's own supply and usage charges.

Our data indicates that the revenue per customer a retailer receives generally moves in line with changes in network costs. This relationship is particular strong between 2007–08 and 2013–14 where network revenues were increasing significantly. Further, as network costs decreased in 2015–16, the retailer's revenue per customer also decreased.

However, we note that not all retailers necessarily treat network costs as a one for one cost pass through. Some retailers expressed difficulty in providing disaggregated network cost data to the ACCC. This indicates that for these retailers, changes in network prices do not necessarily directly translate into changes to the retailer's tariffs. These retailers may adopt different pricing methodologies rather than using a bottom–up cost stack methodology.

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108 AER, *AER releases findings on smart meter spending*, media release, 16 December 2016.

109 The primary reason for the difference in energy usage is because Victorians on average consumer more gas than Tasmanians. Gas is a substitute for electricity usage in particular for hot water, cooking and heating.

2.4. Environmental schemes

Federal and state Governments have introduced environmental policies to encourage greater uptake of renewable generation and businesses and households to become more energy efficient and reduce carbon emissions. The majority of these schemes ultimately impose costs on retailers and amount to a proportion of a consumer's electricity bill, unless funded from the tax base.

The data available to the ACCC indicates that environmental schemes comprised about seven per cent of retailers' total costs and margins across the NEM in 2015–16.

This is similar to estimates from several recent public reports. For example, the Grattan Institute's *Price Shock* report estimated that such schemes account for about seven per cent of a Victorian customer's bill,[110] while the AEMC similarly estimated that they account for seven per cent of a representative customer's bill on a NEM-wide basis.[111]

2.4.1. What are the causes of environmental costs?

Environmental (or 'green scheme') costs are caused by governmental schemes that are put in place in order to achieve a variety of environmental policy goals such as:

- increasing energy efficiency
- encouraging the greater introduction of renewable or lower emission generation into the NEM
- encouraging the take-up of rooftop solar panels by individual users.

While these may be important policy goals, they do raise the overall costs of energy purchased by end-user customers. This section summarises the nature of the schemes that were in operation over the period of the data examined by the ACCC, and that may have led to increased costs that are then recovered from energy users.

The increased presence of renewables and rooftop solar within the generation mix would also have an effect on the wholesale market, although the nature of this effect is unpredictable and may vary over time. The effect of environmental schemes is examined further in chapter 3.

Renewable Energy Target

The Australian Government in 2001 introduced a national RET scheme.[112] It is designed to require an increasing proportion of electricity generation each year to be from renewable sources. In January 2011 the scheme was split into the Large-Scale Renewable Energy Target (**LRET**) scheme and the Small-scale Renewable Energy Scheme (**SRES**).

The annual LRET target for 2017 is just over 26,000 GWh from large scale renewable energy projects, and increases each year to the 2020 target of 33,000 GWh, which is estimated to be 23.5 per cent of Australia's electricity generation being sourced from

[110] Grattan Institute, March 2017, p. 10.

[111] AEMC, 2017 Retail Energy Competition Review, p. 304.

[112] Clean Energy Regulator, History of the scheme, 30 November 2016, viewed 14 August 2017, http://www.cleanenergyregulator.gov.au/RET/About-the-Renewable-Energy-Target/History-of-the-scheme.

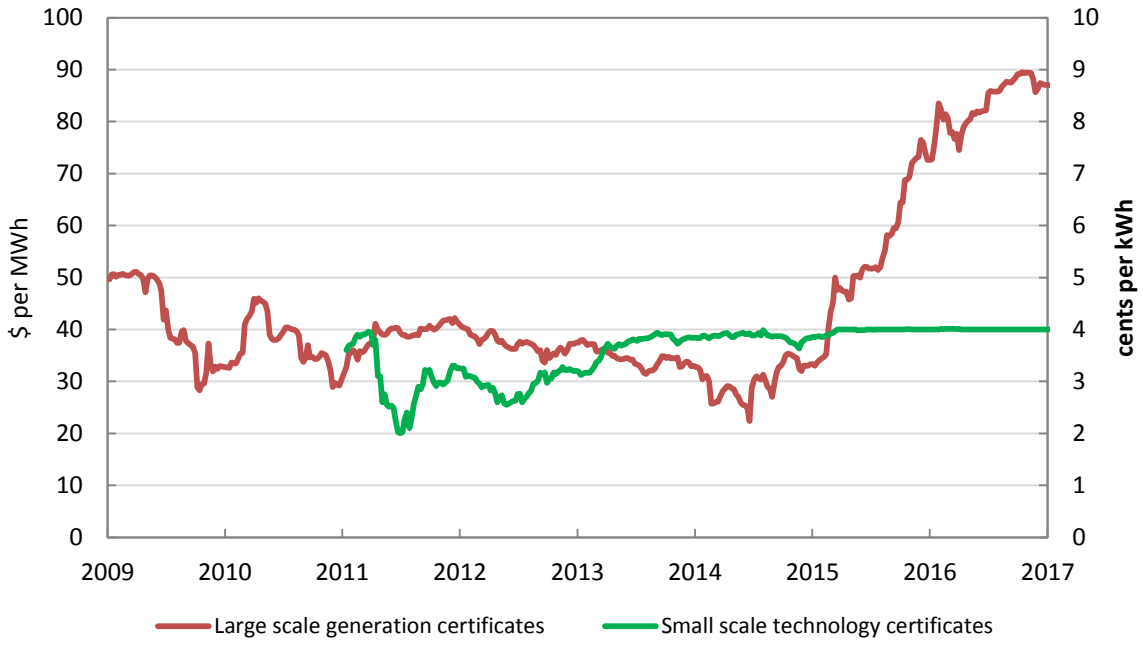
renewables.[113] The SRES target is set each year and defined as a proportion of a retailer's total electricity purchases. The 2017 small-scale technology percentage is 7.01%.[114]

To meet the LRET, energy retailers are obliged to acquire large-scale generation certificates (**LGC**), created for electricity generated by accredited power stations. These can be self-generated – for example if a gentailer owns its own renewable generation – or purchased from accredited generators either on the open market or through long term contracts.

Retailers are also obliged to acquire small-scale technology certificates (**STC**) created from the installation of eligible solar hot water or small generation units such as solar PV panels. Retailers can purchase STCs either on the open market or through the STC clearing house, which is administered by the Clean Energy Regulator.[115]

As Figure 2.36 demonstrates, LGC prices have increased sharply from a low of $22 in June 2014 to almost $90 in January 2017 on the spot market. STC prices have steadied around $40 since 2013. The prices of certificates bought on the open market are negotiated between buyer and seller whereas certificates bought through the small-scale technology certificate clearing house are bought at a fixed price of $40 per certificate, which effectively places a price cap of $40 per certificate on the overall market.

Figure 2.36: LGC and STC prices, January 2013 to January 2017



Source: Clean Energy Regulator

113 Minister for the Environment, *Paris and beyond: an integrated approach to climate and the environment*, Speech delivered to the National Press Club, Canberra, 25 November 2015.

114 Clean Energy Regulator, *The small-scale technology percentage*, 22 May 2017, viewed 14 August 2017, http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/the-small-scale-technology-percentage.

115 Clean Energy Regulator, *Buying and selling small-scale technology* certificates, 8 May 2017, viewed 14 August 2017, http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/Agents-and-installers/Small-scale-technology-certificates/Buying-and-selling-small-scale-technology-certificates.

State certificate and efficiency schemes

Several states introduced their own environmental policies, based on either the use of certificates in the same way as the RET, or through other charging methods.

The Victorian Energy Efficiency Target[116] and New South Wales Energy Saving Scheme[117] are government schemes designed to reduce greenhouse gas emissions, encourage the efficient use of electricity and gas, and encourage the development of energy efficiency businesses. Retailers are required to fund energy efficiency projects through the purchase of certificates.

Between 2005 and 2014 Queensland had a gas scheme to encourage the establishment of gas powered generation.[118] Retailers were required to source a proportion of their electricity each year through the purchase of Gas Electricity Certificates from accredited gas powered generators.

South Australia[119] and the ACT[120] have introduced schemes to encourage households and businesses to save energy by requiring retailers to meet yearly energy efficiency targets. Retailers conduct household energy audits and provide energy efficient products such as light globe replacements and standby power controllers.

Solar feed-in tariffs

An additional category of state environmental schemes has been the use of high feed-in tariffs to encourage the uptake of rooftop solar panels.

To encourage this uptake, state governments implemented schemes where households and businesses that purchased solar panels received payments for electricity generated from their rooftop solar that exceed the market value of this electricity. Households and businesses receive payments from their distributor, which recover these costs through increases in distribution network prices, which are a component of each customer's electricity bill. These costs increased as a growing number of households and businesses participated in the schemes and received payments.

These schemes are transitional in nature[121] and are now closed to new entrants. However, households and business that joined before these schemes closed and maintain their eligibility[122] will continue to receive premium feed-in tariffs until 2024 to 2031, depending on the jurisdiction (with the exception of the NSW scheme, which ended on 31 December 2016).[123] For example, the 88,000[124] Victorian Premium Feed-in Tariff scheme participants

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116 ESC Victoria, *Overview*, viewed 14 August 2017, https://www.veet.vic.gov.au/Public/Public.aspx?id=Overview.

117 IPART, *How the scheme works*, viewed 14 August 2017 http://www.ess.nsw.gov.au/How_the_scheme_works.

118 Queensland State Development, Infrastructure and Industry Committee, *Energy and Water Legislation Amendment Bill 2013: Report 29*, August 2013, Queensland Parliament.

119 ESCOSA, *REES Overview*, viewed 14 August 2017, http://www.escosa.sa.gov.au/industry/rees/overview.

120 ACT Environment, Planning and Sustainable Development Directorate, *Energy Efficiency Improvement Scheme,* ACT Government, viewed 14 August 2017, http://www.environment.act.gov.au/energy/smarter-use-of-energy/energy_efficiency_improvement_scheme_eeis.

121 Council of Australian Governments (**COAG**), Revised National Principles for Feed-in Tariff Arrangements, 7 December 2013.

122 Households and businesses can lose eligibility if they move premises, increase their system capacity or change their electricity retailer.

123 NSW Department of Planning & Environment Resources and Energy, *Solar Bonus Scheme ends 31 December 2016,* NSW Government, viewed 14 August 2017, http://www.resourcesandenergy.nsw.gov.au/energy-consumers/solar/solar-bonus-scheme/solar-bonus-scheme.

124 Victorian Department of Land, Water and Planning, *Premium feed-in tariff,* Victorian Government, viewed 14 August 2017, https://www.energy.vic.gov.au/renewable-energy/victorian-feed-in-tariff/premium-feed-in-tariff.

that entered the scheme before 29 December 2011 will continue to receive a 60 cents per kWh tariff until 2024.[125]

Households and businesses that are ineligible to participate in such schemes can instead receive payments from their retailer for electricity exported back into the grid. Retailers will be able to use this electricity to avoid having to purchase electricity from the wholesale market, thus reducing their wholesale costs. The rate that they receive from the retailer will be lower than the premium feed-in tariffs. In Victoria, for example, they will receive at least the minimum electricity feed-in tariff, set by the ESC Victoria. The 2017–18 minimum electricity feed-in tariff is at 11.3 cents per kWh[126], less than a fifth of the value of the Premium Feed-in Tariff. However, this is higher than the 2016–17 spot price of around 7 cents per kWh.

Carbon price

A carbon price was introduced by the Australian Government on 1 July 2012 and operated until 1 July 2014.[127] The scheme placed a fixed price on carbon, starting at $23 per tonne of carbon dioxide equivalent emitted. The carbon price imposed an additional cost on fossil fuel generation that was recovered through increases in the cost of wholesale electricity, which is a component of each customer's electricity bill. These increases can be seen in wholesale cost charts in section 2.2 above.

The NSW and ACT Governments also introduced schemes in 2003[128] and 2005[129] respectively that imposed mandatory greenhouse gas benchmarks on electricity retailers with the aim to reduce greenhouse gas emissions and develop and encourage activities to offset the production of greenhouse gas emissions. These state based schemes came to a close when the federal carbon price scheme came into effect.

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125 Victorian Department of Land, Water and Planning, *Closed feed-in tariff schemes,* Victorian Government, viewed 14 August 2017, https://www.energy.vic.gov.au/renewable-energy/victorian-feed-in-tariff/closed-feed-in-tariff-schemes.

126 ESC Victoria, *Minimum Electricity Feed-In Tariffs,* viewed 14 August 2017, http://www.esc.vic.gov.au/project/energy/2134-minimum-feed-in-tariff/.

127 Clean Energy Regulator, *About the Mechanism,* 11 May 2015, viewed 14 August 2017, http://www.cleanenergyregulator.gov.au/Infohub/CPM/About-the-mechanism.

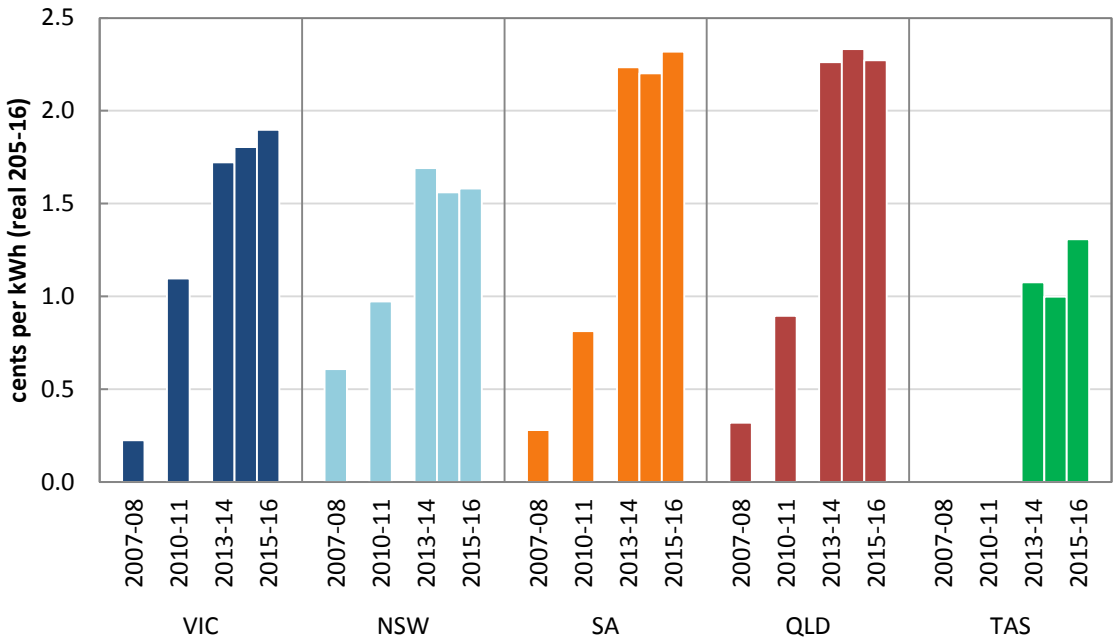
128 IPART, *Greenhouse Gas Reduction Scheme*, viewed 14 August 2017 https://www.ipart.nsw.gov.au/Home/Industries/Energy/Energy-Savings-Scheme/Greenhouse-Gas-Reduction-Scheme.

129 ICRC, *Overview of the ACT scheme,* viewed 14 August 2017, http://www.icrc.act.gov.au/archives/energy-list/act-greenhouse-gas-abatement-scheme/overview-of-the-act-scheme/.

2.4.2. Observations about environmental scheme costs from retailer data

Figure 2.37 shows the average environmental costs on a cents per kWh basis across states.

Figure 2.37: Average environmental costs for residential customers (c/kWh) by state, real in 2015–16 dollars, 2007–08 to 2015–16



Source: ACCC analysis based on retailers' data.

Depending on the jurisdiction, the data that retailers have reported to us indicates the costs associated with contributing to various state and federal government environmental policies have risen from around 1–2 per cent of retail bills in 2007–08 to around 7 per cent of retail residential bills in 2015–16. The above Figure 2.37 demonstrates these costs in cents per kWh form, showing that costs of environmental policies have been highest in South Australia and Queensland in recent years.

The main drivers behind this increase are the RET scheme and state government premium feed-in tariff schemes, which respectively account for around 60 per cent and 30 per cent of total environmental costs in the 2015–16 financial year across all customers.

As noted above, LRET certificates are commonly traded through brokers on spot markets, or through long term contracts between accredited renewable generators and retailers. In January 2009 the spot price was $50 per MWh, and in June 2014 was as low as $22 per MWh. This has increased to close to $90 per MWh in January 2017. Relevantly, the amount of certificates needed by retailers has been increasing each year over the period since 2007–08 with the renewable power percentage having increased from 2.7 per cent to 12.75 per cent in 2016 (and 14.22 per cent in 2017). However the renewable generation stock has also been increasing at the same time.

Although STC prices have been relatively stable since their introduction in January 2011, the amount of certificate prices required to be purchased by retailers has fluctuated year to year, peaking in 2012 at 44.8 million certificates, when the scheme had a multiplier in place that offered multiple certificates for each MWh of electricity generated.

Various state Governments introduced premium feed-in tariffs in 2008 to 2010, depending on the jurisdiction. The premium feed-in tariff costs in particular appear to be more significant

in South Australia and Queensland, reflecting the higher uptake of those schemes, explaining some of the higher costs noted above. These schemes lead to a rapid uptake in rooftop solar, and the costs of reimbursing rooftop solar owners for the electricity they fed into the grid increased as more customers installed eligible systems. The costs from these schemes has either plateaued or declined after they closed to new entrants around 2011 and 2012, depending on the jurisdiction. As these schemes represent a large component of total environmental costs, their introduction and rapid take-up is particularly reflected in Figure 2.37 in the 2013–14 to 2015–16 financial years. While new customers can still sell electricity back into the grid outside of these schemes, the lack of availability of these premium rates means that retailers will be paying closer to market rates for wholesale electricity – and that electricity from solar PV is closer to simply being another source of wholesale electricity.

While the carbon pricing mechanism was a relevant environmental cost for its period of operation, it has not had a direct impact on the overall increase of retail bills over the period between 2007–8 to 2015–16, as the scheme was only operating between the 2012–13 and 2013–14 financial years.

2.5. Retail

At the retail level, a retailer will attempt to recover its costs of operation, and obtain a level of profit margin.[130]

The costs of operation and the profit margin together are often referred to as the 'gross margin', while the profit margin alone is sometimes referred to as the 'net margin'. Increases in gross margin could potentially be due to increases in costs or profits, or both.

Data provided by retailers has indicated that, on average across the NEM in 2015–16, retailer gross margin was 24 per cent of the total cost stack, with this being made up of a 16 per cent retail cost component and a 8 per cent EBITDA net margin component.

Other studies have had more limited ability to obtain information directly from retailers as to both their costs and levels of returns. However, estimates of the overall gross margin component have ranged widely. At the lower end, the ICRC considered that total gross margin should be 14 per cent of the total electricity bill for 2017.[131] In contrast, some analysts have estimated gross margin to be in the order of 33 per cent or 43 per cent of a household electricity bill, depending on the relevant time period.[132]

Box 2.7: What are retailers' costs of operation?

The costs incurred by retailers as costs of operation can be broadly thought of as falling into two categories:

- costs to serve – the cost incurred to provide retail services to an existing customer (such as providing a billing service, losses to bad debts, and customer assistance and regulatory compliance costs)
- costs to compete (costs to acquire and retain) – the costs to compete against other firms for customers in the retail market (such as marketing and advertising, or commissions paid to commercial price comparator services), which in turn can be

130 There are a number of possible accounting measures that can be used to assess net margin, including EBITDA, earnings before interest and tax and net profit after tax. The ACCC has concentrated on EBITDA in its analysis. Ideally, an assessment of return on capital should also be made, but the ACCC did not have information on capital employed for this report.

131 ICRC, *Final report: Standing offer prices for the supply of electricity to small customers from 1 July 2017*, Report 6 of 2017, June 2017, p. iii.

132 CME, July 2017, p. 42; Grattan Institute March 2017, p. 16.

broken down into the cost to acquire customers and the costs to retain customers.

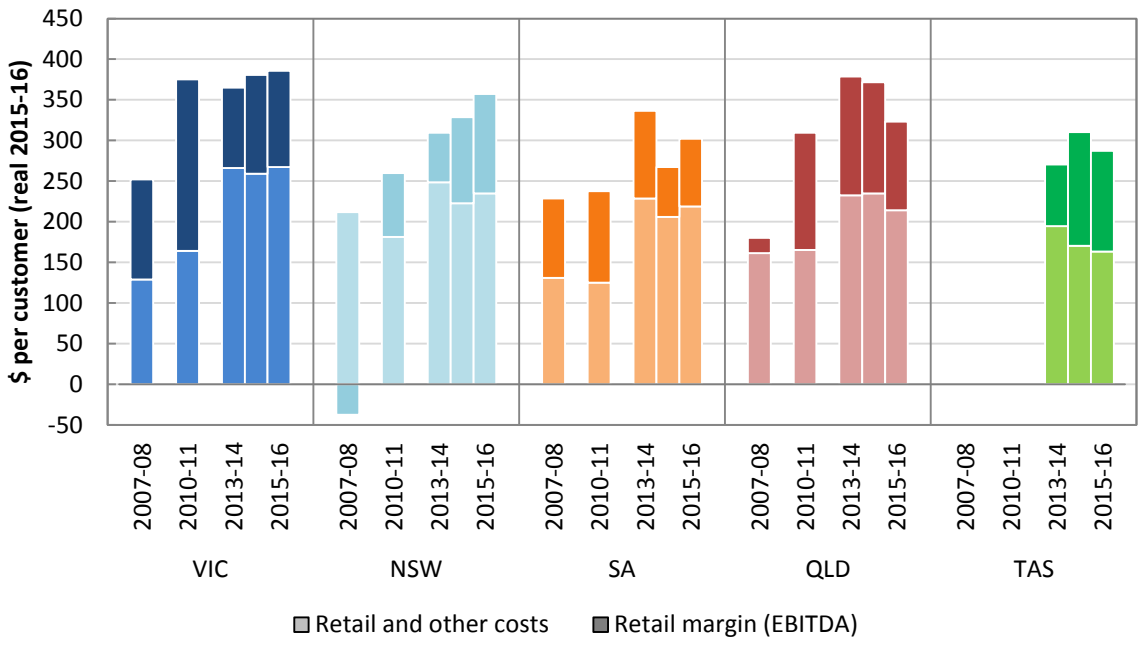
Corporate overheads, depreciation and amortisation, and some other costs can fall into one or both of these categories, or can be separate shared costs of a retail business.

The distinction between costs to serve and costs to compete tries to separate out the costs of simply providing a retail service from those costs that arise as a result of the introduction of competition. Relevantly, the Victorian independent review considered that these costs of competition had increased overall prices to consumers and that these costs should not be allowed to be recovered in its proposed 'basic service offers'.[133]

2.5.1. Gross margin

Figure 2.38 below shows the retail gross margin in dollar terms, as reported by retailers, broken up between the costs component and the EBITDA component.

Figure 2.38: comparison of retail costs and EBITDA margins by state, $/customer basis, 2007–08 to 2015–16, real 2015–16 dollars



Source: ACCC analysis based on retailers' data.

The ACCC considers that this data suggests a number of things. Firstly, retail costs make up a significant component of the overall retailer gross margin. In 2015–16, those retailer costs represent 67 per cent of the overall retail gross margin.

Secondly, while the overall gross margin is significantly higher in 2015–16 than in 2007–08, it appears that a lot of this is due to increases in retail costs, rather than increases in EBITDA margin. This is a largely consistent result across the period, although it varies by state for particular years.

Finally, the 2015–16 gross margins are increasingly similar across states, perhaps suggesting that retailers in a number of competitive markets are adding a fixed component of gross margin to all customers, and that they approach those costs as being incurred on a national basis.

[133] Thwaites, Faulkner and Mulder, August 2017, pp. 23, 53-54.

2.5.2. Retail costs

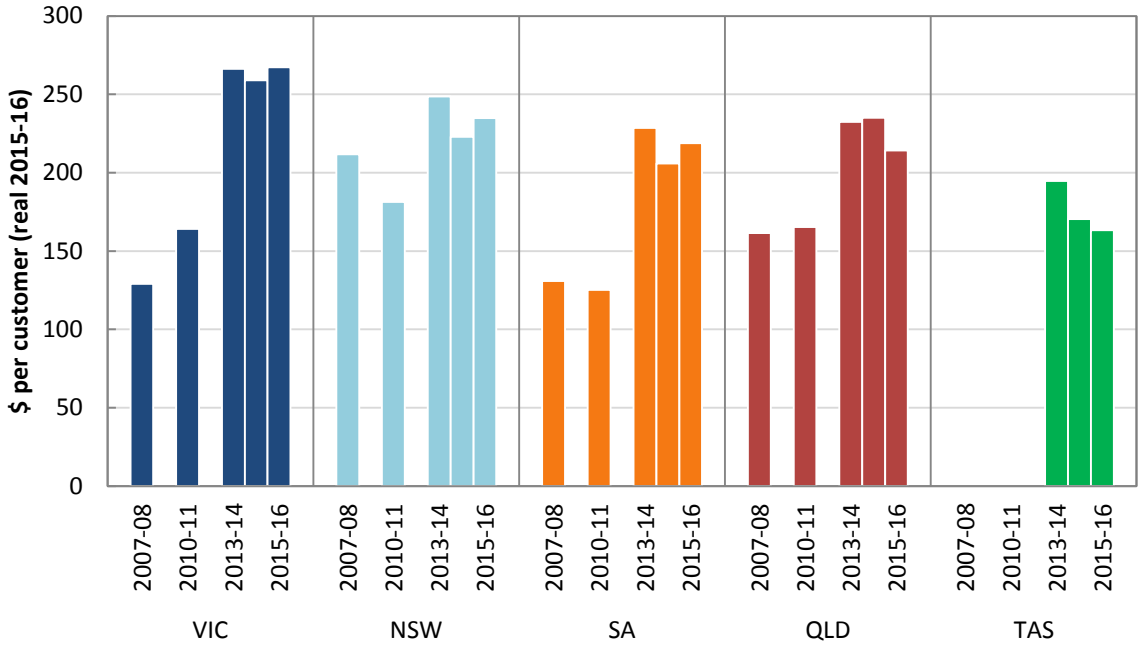
As noted above, it has typically been difficult for other studies to estimate the retail cost component. However, some insight about possible relevant proportions can be obtained from jurisdictional regulators' price-setting processes. For example, the ICRC in 2017 allowed for retail operating costs to be 7.7 per cent of the total costs.[134]

The information provided by retailers, as shown below in Figure 2.39, indicates that there has been an increase in average retailer costs between 2007–08 and 2015–16 in real terms. Overall, on a NEM-wide basis, those retailer costs were low in 2007–08 and 2010–11 (around $150), went up significantly by 2013–14 (to around $250) and have then decreased slightly since that time. However, costs overall in 2015–16 remained significantly higher than in 2007–08. On a NEM-wide basis, over the period from 2007–08 to 2015–16, costs had increased by around 50 per cent in real terms.

In both percentage and dollar terms, the highest costs are incurred in Victoria, where in 2015–16 the retail costs accounted for almost 20 per cent of the average customer bill. The ACCC notes that Victoria is the NEM region that has had retail competition for the longest period of time and the lowest level of market concentration now, suggesting that competition has not had a significant effect in curtailing retailer costs in that state. However, some of the higher costs may reflect the costs of complying with the different Victorian regulatory regime. Our data also indicates that customer acquisition costs were relatively higher in Victoria than other states.

The lowest percentage retail costs were in Tasmania, where they accounted for around 8 per cent of the overall customer bill. Tasmania does not have retail competition for residential customers. The second lowest was Queensland, where they accounted for around 12 per cent of the average customer bill. The ACCC notes that the south east region of Queensland was only opened up to retail competition in July 2016.

Figure 2.39: Average retailer operating costs, $ per customer, by state, real terms in 2015/16 dollars, 2007–08 to 2015–16



Source: ACCC analysis based on retailers' data.

[134] ICRC, June 2017, p. 54.

The distinction between cost to serve and cost to acquire and retain is not always clear or well-defined, and different retailers may account for similar costs differently. However, the ACCC considers that some insight can be gained by examining these two broad components.

The retailer data indicates that cost to serve is the larger component of costs, being around twice the size of costs to acquire and retain. The information provided to the ACCC suggests that any decrease in costs in recent time periods is largely due to a downward trend in costs to serve. While the data is difficult to interpret, this perhaps suggests that companies are attempting to become more efficient at core functions like billing. Drivers of this reduction may include systems overhauls and automation that was pursued by a number of companies in the period between 2012 to 2014, the introduction of smart meters in Victoria, and the impact of conditional pay on time discounts and use of direct debits reducing timeframes and costs for retailers to receive payment.

However, the data indicates that costs to acquire and retain are not similarly decreasing, and do add a significant wedge on top of the costs to serve that retailers recover from customers. This would suggest that it is difficult for companies to reduce the 'costs of competition'. The ACCC also notes that the costs to compete appear to be highest in Victoria, which has had retail competition for the longest time period. Furthermore, our data indicates that smaller retailers typically have higher cost to acquire and retain proportions as a share of their overall retail costs. The ACCC will seek to examine the different types of costs further in its final report.

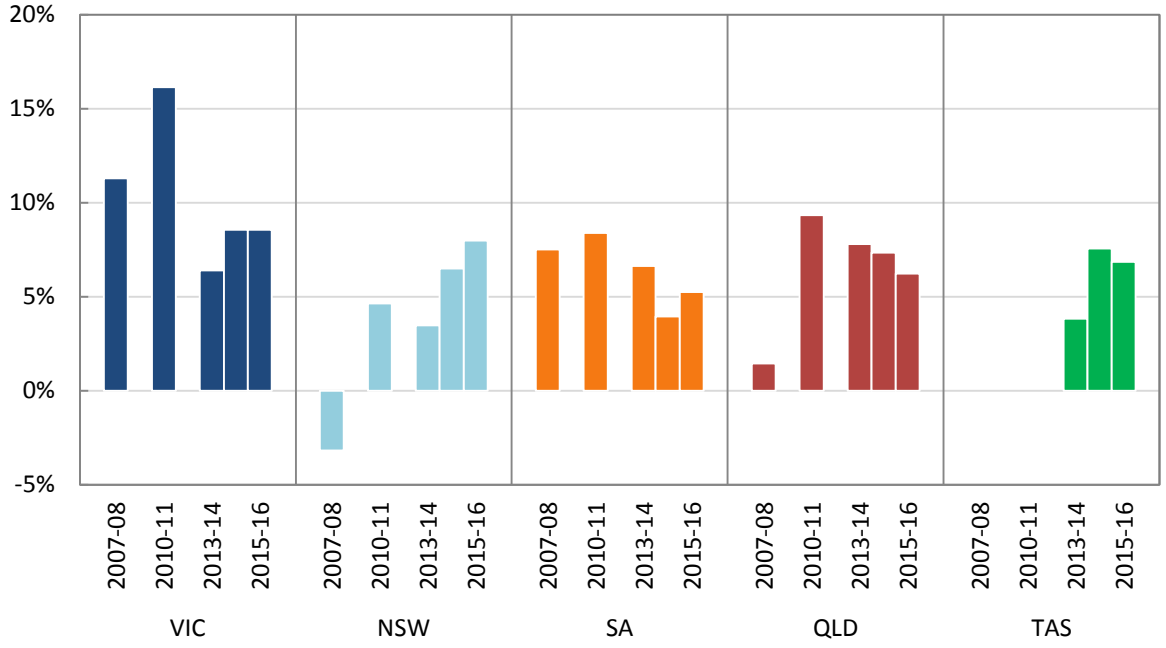
There are no pronounced differences between states in the above analysis, either in the overall level of costs, or the general trend of lower costs in 2007–08 and 2010–11, with higher costs in later years. This reflects feedback from several retailers that they do not distinguish costs in their records between geographic regions – for example, because they operate one call centre that serves customers across various regions of the NEM.

However, the ACCC notes that retailers do incur costs that differ between regions – for example, targeted marketing campaigns or costs of compliance with jurisdictional rules – and that some retailers only operate in particular NEM regions.

2.5.3. Retail margins

Once retailers account for their wholesale, network and environmental scheme costs, and recover their own costs of operation, they will be left with a measure of profit or loss, 'net margin', or return on their operations. In a workably competitive market, average retailer profitability, over time, ought to be within a range that is commensurate with retail market risk. Where this return is 'too high' (however this is determined), this may be an indication that a level of supernormal profits are being obtained, and that particular firms are exercising market power. The levels of return are also likely to vary between firms in a retail market, depending on their business model and position in the market.

Figure 2.40: Average retailer percentage margins by state (EBITDA), percentage of overall cost stack, residential customers, 2007–08 to 2015–16



Source: ACCC analysis based on retailers' data.

Figure 2.40 shows that the data provided by retailers did not provide a clear trend in retail margins over time, and the results varied by state. However, profit margins across states were generally in the range of 5 to 10 per cent. The ACCC notes that this achieved margin is somewhat higher than the margins allowed by jurisdictional regulators where retail prices were regulated. For example, IPART in 2013 allowed an EBITDA return of 5.7 per cent on top of costs,[135] while the ICRC in 2017 allowed an EBITDA retail margin of 5.3 per cent.[136] The difference between the higher net margins observed in the data provided to the ACCC compared to margins allowed under regulatory regimes is in the order of $60 to $70 on a per customer basis annually for a residential customer. However, the margins observed in our data are lower than the Grattan Institute estimate that retailers achieved profit margins of between 13 and 22 per cent on a discounted market offer bill in Victoria.[137]

On a state by state basis, percentage margins appear to be increasing in NSW, but decreasing in South Australia and Queensland. Percentage margins appear to be generally higher in Victoria, particularly in 2010–11 immediately after deregulation of the retail sector. In the most recent two years of data, the Victorian percentage margin stayed relatively constant. It has also generally persisted at a higher level than in other states, although the differences between all states were decreasing in the later years of data.

The ACCC notes that there was significant variability between retailers in the level of margin that was reported. Certain retailers reported negative margins for some or all of the periods, for example during an establishment phase after initially entering the market. The ACCC intends to explore these differences further in its final report.

The ACCC also notes that the above figures are based on EBITDA margins – which do not account for the depreciation, amortisation, tax and interest payments that firms may make.

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135 IPART, *Review of regulated retail prices and charges for electricity, Final report*, June 2013, p. 89.

136 ICRC, June 2017, p. 52.

137 Grattan Institute, March 2017, p. 17.

To the extent that these costs are significant, the above percentages will overstate the 'true' profit being made by retailers.

The above margin information is also based on a percentage of overall revenue. Changes in other components of the cost stack such as network and green schemes over the period will therefore mean that the percentage margin component will change over time. As such, in dollar terms, Victorian margins are similar to other states, but higher in percentage terms due to the lower overall costs across networks, wholesale and environmental costs in the state.

2.6. Next steps

The above analysis has examined at a high level the components of the retailer 'cost stack' for electricity prices in each of the NEM states.

As noted in this chapter, the data obtained by the ACCC suggests that, over the period from 2007–08 to 2015–16:

- Wholesale costs were relatively flat in nominal terms over the period of the data, and decreased in real terms. However, this was prior to recent significant changes in wholesale costs.
- Network costs increased significantly over the period examined, and have been the main driver of increases in retail prices.
- Environmental costs have increased significantly in all regions, driven in particular by premium feed-in tariff schemes and federal environmental schemes introduced during this period.
- Retailer costs have increased significantly since competition was introduced, and are a significant component of costs.
- Retail margins have been in the order of 5 to 10 per cent EBITDA and, while differing between states, appear to be higher in Victoria.

As noted at the start of this chapter, the ACCC has had limited time to examine the retailers' information for this preliminary report. It will seek to examine the information provided in more detail for the final report. Areas that the ACCC may seek to examine further include:

- the differences between different business structures and ownership types
- the implications for wholesale costs of differing approaches to purchasing and hedging wholesale market exposure
- the effect of supply, usage and metering components of network charges
- the implications of particular environmental schemes
- more detailed cost drivers of retail costs
- whether retailer profit margins are commensurate with risk or indicative of competitive constraints in the market.

The ACCC welcomes views on the merits of examining the above areas in greater depth, or suggestions for other areas to examine.

3. How is the market functioning?

Key points

- The wholesale (generation) market is highly concentrated.
- The demand-supply balance for electricity has significantly tightened.
- Despite many retailers competing for customers across the NEM, the market shares of the three largest retailers remain very high.
- Vertical integration between retail and wholesale may be limiting access to risk management products for non-vertically integrated retailers.
- The network regulation framework has allowed for inefficient costs to be recovered from customers.
- Network tariff structures mean that some customers are paying more than they should for electricity.
- Environmental policies have had unequal impacts across customers.

Chapters 1 and 2 of this report have illustrated the increases in retail electricity bills faced by Australian households and businesses. This chapter explores what has been driving those increases at each level of the supply chain. It first outlines issues for further consideration in the two competitive segments, retail and wholesale. It then goes on to consider the impact of the relevant regulatory regime on the increase in network prices before concluding with an assessment of the impact of environmental schemes.

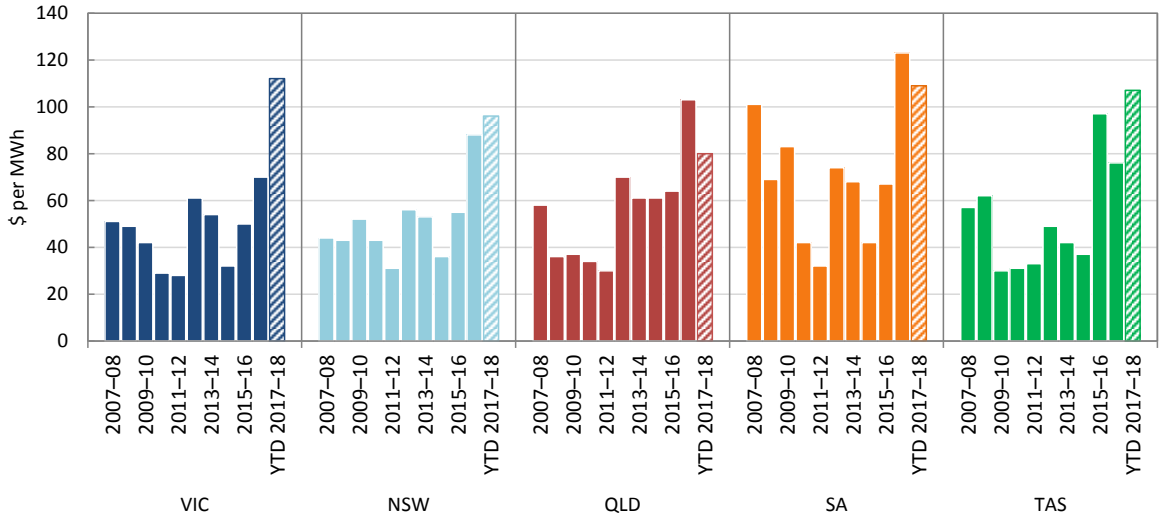
3.1. Wholesale

The wholesale cost of electricity makes up a significant proportion of total electricity costs. Chapter 2 identifies wholesale costs as making up around 22 per cent of residential customer bills in the NEM in 2015–16, and as much as 28 per cent in South Australia.

As noted in section 2.2.2 above, wholesale electricity costs actually fell slightly in real terms between 2007–08 and 2015–16. Since that time, however, there have been dramatic increases. Between 2015–16 and 2016–17, NEM spot prices increased by 60 per cent in Queensland and NSW, by 40 per cent in Victoria and by over 80 per cent in South Australia. Average prices for 2017–18 are so far tracking higher again in most states. Figure 3.1 below illustrates the dramatic shifts in each NEM region since 2015–16.

One of the big three retailers noted in a board paper in February this year that “[w]holesale electricity movements and volatility have not been previously observed to this extent over such a compressed period.”

Figure 3.1: Average spot price 2007–08 to 2017–18* ($/MWh)



Source: 2007–2017: AER, 2017 State of the energy market; 2017–18 YTD: AER electricity market performance report, 20-26 August 2017
* 2017–18 data reflects less than two months of the financial year, over the winter period, so may not be reflective of the full year average price.

The recent steep increases in spot prices indicate that wholesale electricity costs will have increased significantly compared to 2015–16. While the ACCC has not yet obtained data on the actual costs incurred by retailers when purchasing electricity in this period, based on the analysis carried out in chapter 2, we estimate that wholesale costs accounted for around 31 per cent of residential customer bills in the NEM in 2016–17.[138]

These increased wholesale costs are already being passed on to consumers. Major retailers announced retail price rises of up to 20 per cent from 1 July 2017 in some NEM regions. In announcing its price increases, EnergyAustralia attributed the increases to "higher wholesale costs (the cost of buying electricity on behalf of customers) following the closure of large coal-fired power stations, increased demand for gas by liquefied natural gas projects in Queensland and reliability issues with some big generators."[139]

The ACCC considers that a range of factors may be contributing to the recent increases in wholesale prices and will be focusing on the following in this chapter:

- the structure of the wholesale market
- a tightening of the demand-supply balance
- increases in gas prices, and
- the potential for strategic conduct by large generators.

138 See Box 2.4 in chapter 2.

139 EnergyAustralia, *Annual review of energy tariffs*, media release, 16 June 2017.

3.1.1. Wholesale market structure and concentration

An effective wholesale market is critical to delivering affordable electricity to households and businesses. The effective operation of the wholesale market relies on competition between generators to deliver low prices.

A number of submissions to the ACCC and statements at public forums suggested that wholesale prices are clearly excessive relative to the cost of production and therefore conclude that the market is suffering from a lack of competition.[140] Others argue that it is competitive.[141]

The ACCC has examined two key structural features of the wholesale market:

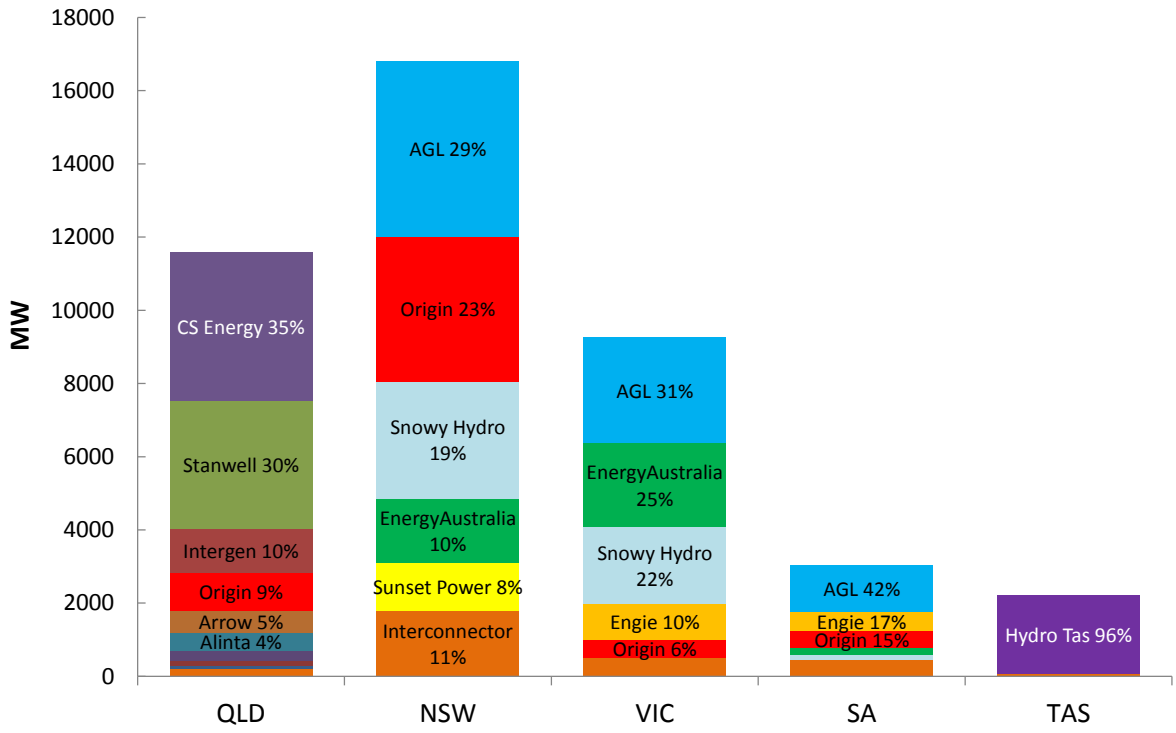
- the level of concentration
- the extent of vertical integration.

Concentration in the wholesale market

Over 300 registered generators sell electricity into the NEM.[142] The generation market is, however, highly concentrated. Market shares for wholesale generation are presented in Figure 3.2 and Figure 3.3 below.

Figure 3.2 shows market shares by generation capacity installed. This chart likely overstates the market share of businesses that have mostly peaking generators (such as Origin in Queensland and Victoria), or fuel-constrained hydro plants (such as Snowy Hydro), who may have a lot of generation capacity but typically only run it for short bursts at peak times.

Figure 3.2: Market share by generation capacity, 2017



Source: AER, State of the energy market May 2017

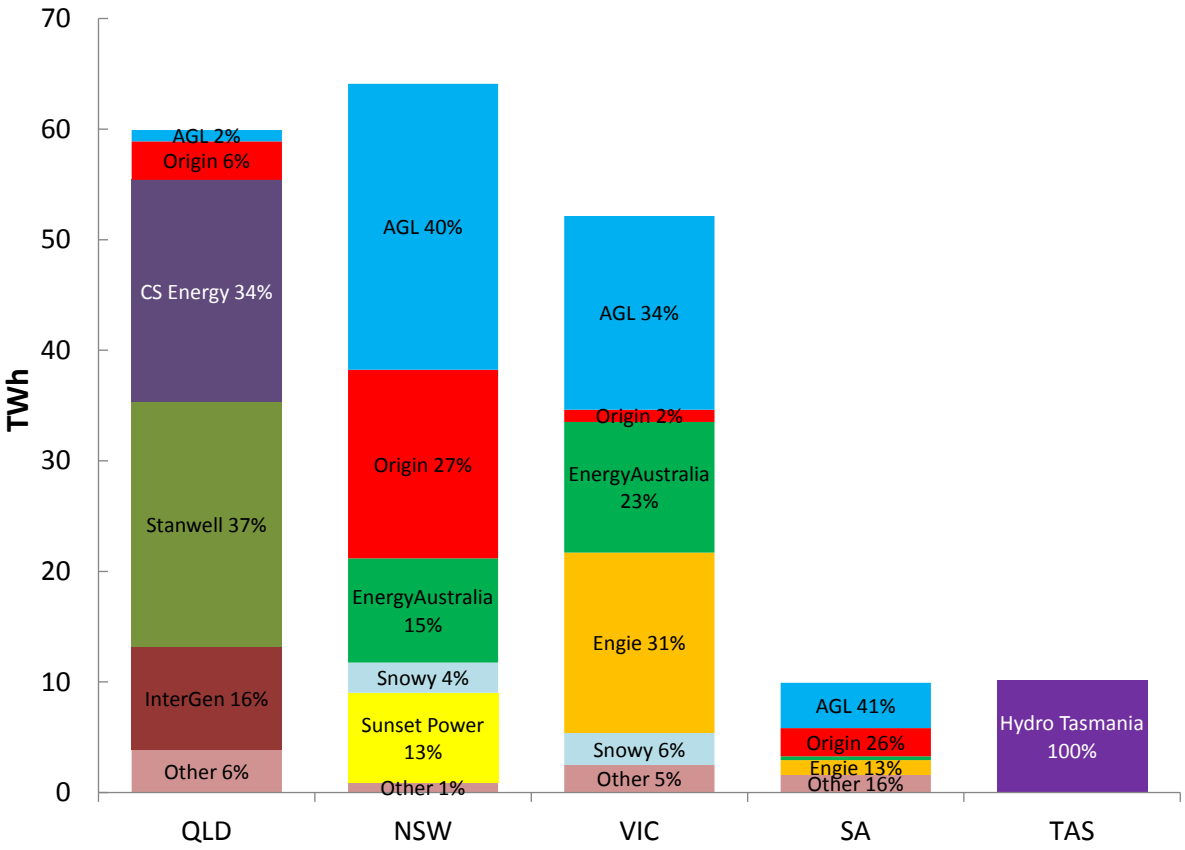
140 Major Energy Users Inc, June 2017, p. 29.

141 EnergyAustralia, *Cover letter to EnergyAustralia's submission*, 30 June 2017, p. 2.

142 AER, 2017 State of the energy market, p. 43.

Figure 3.3 shows market shares by the actual generation dispatched in 2016–17. The market share of peaking and fuel-constrained generators is noticeably lower (for example, this can be seen by comparing the Snowy Hydro figures in each chart). However, Figure 3.3 likely understates the significance of generators that supply electricity when demand is highest, thereby mitigating the potential for price spikes.

Figure 3.3: Market share by generation dispatched, 2016–17



Source: ACCC calculations, AEMO market dispatch data
*The Engie figure includes Hazelwood's output from 1 July 2016 until its closure in March 2017. Engie's generation output in Victoria will be significantly lower in 2017–18.

As Figure 3.2 and Figure 3.3 illustrate, in each NEM region the combined market shares of the two or three most significant generators exceeds 70 per cent on both capacity and dispatched energy measures. In Tasmania, Hydro Tasmania is effectively the only generator, but Tasmania has access to mainland generation through the Basslink interconnector.

Concentration has been increasing. For example, in 2011–12 Queensland consolidated some of its state-owned generation and in 2012 AGL acquired full ownership of Loy Yang A in Victoria. More recently, concentration has been exacerbated by the closure of a number of key facilities. In particular, in 2015–16 Alinta exited the South Australian market when it retired its coal-fired power stations and Engie's share of the Victorian market was significantly reduced in 2016–17 when it closed its Hazelwood power station.

In some NEM regions, a single generation business accounted for more than 30 or 40 per cent of dispatched energy in 2016–17. AGL in particular accounted for over 40 per cent in each of NSW and South Australia, and over 30 per cent in Victoria. In Queensland, the state-owned CS Energy and Stanwell Corporation facilities each account for over 30 per cent of electricity generated.

The high levels of concentration, and the very high market shares of certain generation businesses, raise real concerns. The effective operation of the NEM is predicated on a competitive market. The potential for the exercise of market power has increasingly been a concern as market concentration has increased.

Box 3.1: Bidding in the NEM – How are prices set?

Generators offer to supply the market with specified amounts of electricity at specified prices for set time periods, and can re-submit the offered amounts at any time.

From all the bids offered, AEMO decides which generators will be dispatched. The cheapest bids are selected first, then progressively more expensive bids until enough electricity can be dispatched to meet demand. The final bid needed to meet demand sets the 'dispatch price'.

A dispatch price is determined every five minutes. Every 30 minutes the six dispatch prices for that period are averaged to determine the "spot price".

The 30-minute spot price is paid to all generators for their dispatched electricity during that period, regardless of how they bid. A separate spot price is determined for each of the five NEM regions every 30 minutes. Spot prices are capped at a maximum of $14,200 per MWh. A price floor of –$1000 per MWh also applies.

Large generation businesses know that for a significant period of the day, the dispatch of at least part of their generation capacity will be essential to meet demand (particularly in some NEM regions). This enables them to bid a high price for at least some of their generation capacity in the knowledge that their generation will be dispatched even at that high price. Doing so is rational, profit maximising behaviour and consistent with the National Electricity Rules (**NER**). That said, their ability and incentive to do so may depend on a range of factors, including whether or not they have a retail load and their hedging position.

We note that the AER has recently been asked by the Minister for the Environment and Energy to report on features or generator behaviours that may be detrimental to effective competition in the NSW electricity market. The AER is due to report to the Council of Australian Governments (**COAG**) Energy Council by November 2017.

The effect that large generators may have on a market is illustrated by recent experience in Queensland. In June 2017 the Queensland government, concerned about prolonged high wholesale prices in the state, directed state-owned Stanwell Corporation to offer more capacity in the NEM and alter its bidding strategies to put downwards pressure on wholesale prices.[143] As noted in Figure 3.3 above, 37 per cent of electricity dispatched in Queensland in 2016–17 was generated by Stanwell Corporation.

The intervention achieved immediate impacts in the market. Before the direction to Stanwell Corporation, futures contracts for the 2017–18 summer months in Queensland were trading at around $120 per MWh. Following the direction to Stanwell Corporation, those futures prices dropped to around $100 per MWh and have stayed at that mark since.[144]

It is clear that market concentration overall, and the very high market shares of particular generation businesses in some NEM regions, is a risk to wholesale prices. The NEM is designed to operate with effective competition among generators and any sustained ability for generators to exercise market power is a barrier to effective competition.

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143 Queensland Department of Energy and Water Supply, *Powering Queensland Plan*.

144 At the same time, the Queensland government also directed Stanwell Corporation to bring the Swanbank E gas powered power station back into operation. This is expected to take place in 2018 (Queensland Department of Energy and Water Supply, *Powering Queensland Plan*).

Vertical integration between generation and retail businesses in the NEM

In addition to overall consolidation, there has been a marked shift in the share of generation owned by the big three vertically integrated retailers, AGL, Origin and EnergyAustralia.

The big three supply around 70 per cent of retail electricity customers in the NEM. In the period 2009 to 2017, these companies expanded their market share in NEM generation capacity from 15 to around 48 per cent.[145] In NSW, Victoria and South Australia, their market share in generation is much higher.

Vertically integrated electricity businesses have a range of advantages in the way they can operate in the market. As mentioned in chapter 2, the combination of a retail and generation business provides a natural hedge for each side of the business, and can allow the business to mitigate the impact of market volatility. For example, one of the vertically integrated retailers noted that "[s]pot prices are expected to remain high for the balance of the financial year and it is anticipated that our generation will continue to run at higher volumes in order to capture the higher prices and protect our position." The generation business typically sells the retail business electricity at a transfer price. This can be used to allocate costs between the two parts of the business as the business considers appropriate. At least one vertically integrated retailer made significant adjustments to its transfer price in February 2017 in order to reallocate costs between its retail and wholesale businesses. This followed significant increases in the wholesale price.

The ACCC is concerned about the impact that vertical integration may have on standalone retailers' ability to compete, as discussed in section 3.2.4 below.

The ACCC is also considering whether high levels of vertical integration have an impact on wholesale prices. As part of the Inquiry, AGL submitted a report it commissioned from Frontier Economics on the question of whether vertical integration causes integrated generators to bid more capacity at higher prices or choose to make more plant capacity unavailable. Frontier Economics concludes that vertically integrated generators bid in 4–6 per cent more of their capacity at lower prices, compared to standalone generators.[146]

AGL and Frontier Economics submit that bidding electricity into the NEM at high prices is risky for a vertically integrated business because, should they bid too high and not be dispatched, they not only lose revenue on the wholesale side but still have to purchase sufficient electricity for their retail load. Vertically integrated businesses may therefore have an incentive to price their generation capacity low.[147]

Similarly, AGL submits that vertically integrated businesses are incentivised to bid more of their generation capacity into the market than standalone generators, because vertically integrated businesses want to protect their retail position. AGL submits this incentive also facilitates more timely and efficient investment in new generation.[148]

The ACCC is not concerned by vertical integration per se. However, in certain circumstances high levels of vertical integration raise concerns. In its final report the ACCC will be further exploring the impact of vertical integration, combined with high levels of concentration, on wholesale prices.

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145 AER, 2017 State of the energy market, p. 47.

146 Frontier Economics, *Effects of vertical integration on capacity bidding behaviour (supplementary AGL submission to ACCC Issues paper)*, August 2017.

147 Ibid, pp. 2-3.

148 AGL, *Submission to ACCC Issues Paper*, 18 July 2017, pp. 16-17.

3.1.2. Tightening in the demand-supply balance

The ACCC is considering the extent to which the tightening in the demand-supply balance across the NEM is responsible for recent wholesale price increases. Many of the submissions to the ACCC point to this as a key cause for concern.[149] Prior to 2016–17 all NEM regions had a surplus of electricity generation capacity. In particular, NSW and Queensland have had over 3000 MW of surplus capacity (i.e. generation capacity above maximum demand). However, reductions in generation capacity across Queensland, South Australia, NSW and Victoria have combined with an uptick in electricity demand to considerably tighten supply.[150] The Australian Energy Market Operator's (**AEMO**) 2017 Electricity Statement of Opportunities identified a high risk of instances of insufficient supply requiring load shedding[151] over the next ten years, noting extremely high risks over the peak summer months.[152]

The reduction in capacity is due largely to the decommissioning of a number of older, coal-fired generators. Over the past five years, 2,350 MW of generation capacity has been decommissioned in Victoria (with 1,600 MW of that occurring in early 2017 with the closure of Hazelwood). In NSW, 1,744 MW of generation has been closed. In South Australia, the Northern Power Station (540 MW) and Playford B (200 MW) were permanently retired in 2015–16.

These closures represent around 10 per cent of NSW's capacity, and around 20 per cent of each of Victoria and South Australia's generation capacity.

Critically, the substantial exit of baseload capacity from the market has not been matched by new investment or entry in replacement capacity (see further discussion below).

Other issues are also limiting the ability of some generation to supply electricity. For example, AGL has indicated that, due to difficulties in getting coal delivered to its NSW power stations, it has increased bid prices in the third quarter of 2017 in order reduce dispatch of its generation to ration coal supplies. AGL has noted that it may need to continue to bid in this manner in the fourth quarter of 2017.[153]

Figure 3.4 depicts the average daily maximum demand in NEM regions over the peak summer months for the past three years. Average peak demand in NSW and Queensland has grown by 11 per cent over these three years. It is difficult to point to specific factors that have contributed to these increases, though a series of particularly hot summers in these states is a likely contributor.

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149 AGL, 18 July 2017, pp. 3, 8; Origin, *Submission to ACCC Issues Paper*, 30 June 2017, p. 8.

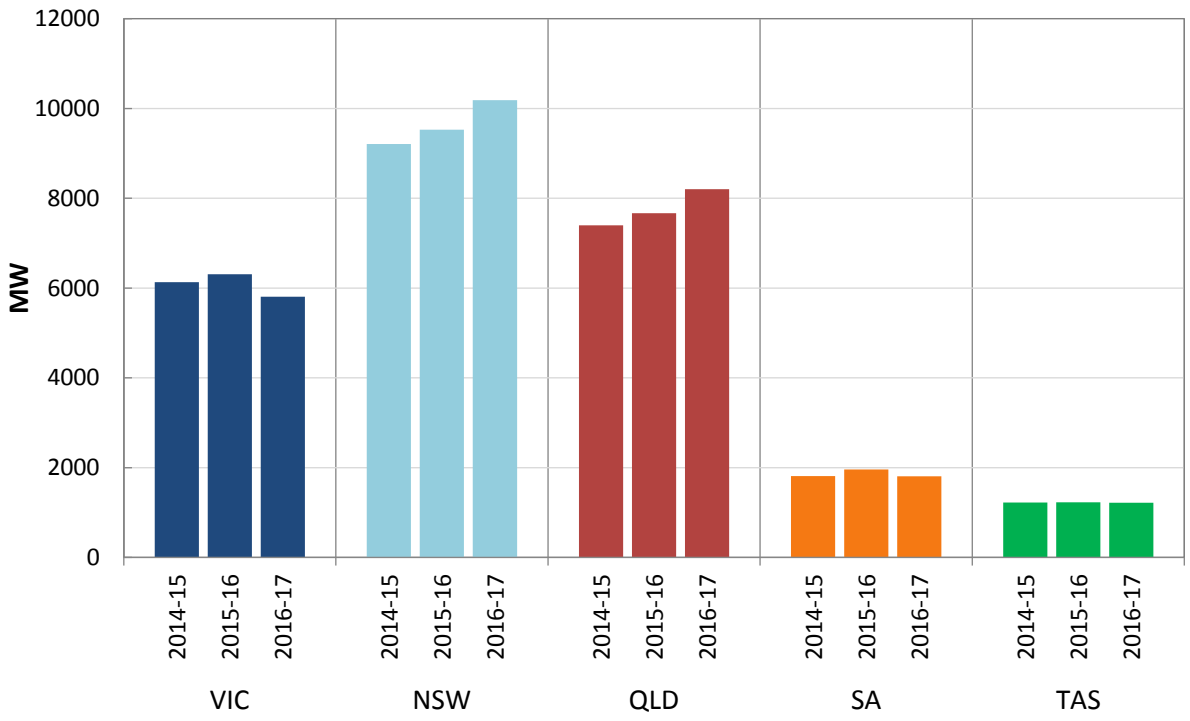
150 AER, 2017 State of the energy market, pp. 22, 40.

151 Load shedding is necessary when the available electricity supply is not sufficient to meet demand. In these circumstances, AEMO directs network operators to restrict or reduce supply to enough customers so as to restore balance between supply and demand. Load shedding protocols differ by state, and aim to protect vulnerable users from losing supply.

152 AEMO, *2017 Electricity Statement of Opportunities*, September 2017, p. 1.

153 AGL, *Supplementary submission to ACCC Issues Paper – NSW Coal Supply*, September 2017, p. 9.

Figure 3.4: Average daily maximum demand in summer months for 2014–15 to 2016–17



Source: ACCC calculations, AEMO operational demand data

While peak demand is often short-lived, the high price cap on NEM prices means that a few periods of high demand and commensurate prices can meaningfully impact overall wholesale prices. Episodes of peak demand demonstrate the need for sufficient supply to be available at key times and the potential for unpredictable events (such as extreme weather or generator/interconnector outages) to create acute energy shortages and very high wholesale prices.

If the trend of insufficient investment continues, the NEM will face further challenges as additional baseload coal plants are retired. For example, NSW is currently forecast to be in a generation deficit from 2022 when the Liddell power station (2000 MW) is currently scheduled to close.[154]

A clear example of the potential price impact of a tightening in the demand-supply balance is the recent closure of the Hazelwood coal-fired power station in Victoria. The decommissioning of Hazelwood is significant for the Victorian market as it contributed a large proportion of Victoria's baseload generation. Wholesale prices in Victoria increased by 40 per cent between 2015–16 and 2016–17, and prices for 2017–18 are tracking to be significantly higher again—the average price so far this financial year is 65 per cent higher than the 2016–17 average, and almost double the average price over 2015–16.

The impact of Hazelwood's decommissioning is detailed further in Box 3.2 below.

[154] AEMO, *2017 Electricity Statement of Opportunities*, p. 20.

Box 3.2: Closure of Hazelwood power station

In November 2016, Engie announced its decision to close Hazelwood on 31 March 2017. In a statement Engie indicated that the aging plant was "no longer economic to operate".[155]

According to Engie, at 1,600MW, Hazelwood accounted for up to 25 per cent of Victoria's electricity supply and more than 5 per cent of Australia's energy supply.[156]

With only five months' notice of its closure there was insufficient time for replacement generation assets to come online. The lack of overlap between the exit of Hazelwood and the entry of new capacity also raised issues from a reliability and security perspective.[157] The Finkel Review has subsequently recommended a notice of closure requirement with a notice period of at least three years to allow new generation capacity to enter the market.[158]

The Thwaites report to the Victorian Government noted that the announcement of the Hazelwood closure has led to significant increases in forward contract prices for wholesale electricity.[159] The AEMC has reported that the rise in forward contract prices is due to the expectation that more expensive black coal and gas generation in NSW and Queensland would replace capacity lost due to Hazelwood's closure.[160] Further, due to retailers' forward contract purchasing strategies, the impact of the Hazelwood closure on wholesale costs will be greater from 2018.

There is some evidence that the market did not accurately anticipate the impact that Hazelwood's closure would have on spot prices. Specifically, prior to Hazelwood's closure, Victoria and NSW prices for futures contracts covering 2018 had tracked quite closely together. However, in the days leading up to the closure, prices for Victorian futures jumped to around $10 per MWh higher than NSW prices. In the weeks following Hazelwood's closure this gap extended to $20 or more for some contracts, though it is closer to $10 again now.

The closure also immediately impacted spot prices in Victoria. In the 30 days leading up to the closure, Victoria's volume weighted average spot price was $87.53 per MWh. In the 30 days following the closure, the average price had jumped to $112.33.

While this jump is significant, it should be noted that Hazelwood's closure does not fully explain the current high wholesale prices in Victoria. The pre-closure average of $87.33 is still higher than prices in previous years.

The AER is currently monitoring market developments in Victoria and South Australia following the closure of Hazelwood, and is scheduled to provide advice on any factors affecting the efficient functioning of the market to the COAG Energy Council in March 2018.

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155 Engie, *Hazelwood to close in March 2017*, media release, 3 November 2016.

156 Engie, *End of generation at Hazelwood*, media release, 29 March 2017.

157 Dr Alan Finkel AO, Chief Scientist, Chair of the Expert Panel, *Independent Review into the Future Security of the National Electricity Market - Blueprint for the Future', June 2017,* p.87.

158 Ibid, p. 87.

159 Thwaites, Faulkner and Mulder, August 2017, p. 46.

160 AEMC, 2017 Retail Energy Competition Review, p. viii.

What response have we seen?

Given the tightening of supply/demand and the increases in spot prices, we would expect to see a response from the market (either in terms of new investment in generation or in demand-side adjustments). This was a foundational principle of design of the NEM.

In the past five years, over 5000 MW of generation capacity has been withdrawn from the NEM, almost all of which is old coal-fired assets being retired. Over the same period, around 2000 MW of new capacity has been installed, leaving a net decline in capacity of more than 3000 MW. Of the 2000 MW that has been added in the past five years, 92 per cent is renewables,[161] which are unable to replicate the constant baseload supply that has been lost as coal-fired generators have been decommissioned.

The Finkel Review found that ongoing policy uncertainty is "undermining investor confidence".[162] That sentiment is echoed in a number of submissions received by the ACCC in the course of this Inquiry.[163] At the time of this report, the Australian Government is considering a recommendation to introduce a Clean Energy Target (**CET**) which the Finkel Review found would assist with investment certainty and bring more generation capacity on line.

The ACCC notes that there is broader uncertainty in the sector, for example in relation to the long term extent of changes in demand (including widespread take-up of rooftop solar PV), new technologies such as battery storage and the future availability and price of fuel sources such as gas.

It is notable that a large quantity of new generation has been proposed (AEMO lists more than 23,000 MW of generation proposals as of May 2017[164]), which may suggest that additional capacity is ready to be developed given the right conditions.

Historically, tightening in the demand-supply balance has typically been met by adjustments in supply as adjusting demand was not supported by technology or effective price signals. The Finkel Review noted that demand response "plays a relatively small role in the NEM when compared with a number of other countries"[165] and is an "as yet under-developed opportunity to maintain reliability."[166]

Demand-side response offers for smaller customers have been muted due to technology limitations, as well as current tariff structures.[167] However, price increases and new technologies (see Box 3.3) will increasingly make demand-side responses attractive even for small customers. Coupled with appropriate financial incentives, this has the potential to facilitate consumers reducing their demand at peak times, and could thereby reduce the need for costly new generation and network infrastructure.

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161 AER, 2017 State of the Energy Market, p. 37.

162 Dr Alan Finkel AO, June 2017, p. 5.

163 AGL, 18 July 2017, p. 11; Alinta Energy, *Submission to ACCC Issues Paper*, 30 June 2017, p. 5; Momentum Energy, *Submission to ACCC Issues Paper*, 30 June 2017, p. 2; Origin Energy, 24 July 2017, p. 1, and EnergyAustralia, 30 June 2017, pp. 1, 5.

164 AEMO, *Generation Information Page*, viewed 4 September 2017, https://www.aemo.com.au/Electricity/National-Electricity-Market NEM/Planning-and-forecasting/Generation-information.

165 Dr Alan Finkel AO, June 2017, p.146.

166 Ibid, p. 101.

167 It should be noted that some forms of demand side management have been in use for decades, most commonly to control the times at which hot water heaters are operated.

Box 3.3: What are demand response technologies?

Demand response technologies allow electricity loads (for example, from a particular appliance such as an air conditioner, or from an entire household or business) to be curtailed in times of peak demand.

The technology can be coupled with retail contracts that expose the customer to some of the volatility in the wholesale market. The customer can take advantage of this volatility by reducing their load when prices are high (for example, by easing the temperature on their air-conditioner, or switching to their battery), and returning to regular usage when prices are lower. The adjustment may be manual or automatic.

Incentivising consumers to reduce demand in peak periods means the NEM does not need to build costly generation and network capacity to serve the rare occasions of absolute peak demand. Instead, that peak is reduced by consumers responding to higher prices.[168]

For residential consumers, a combination of rooftop solar, battery storage and smart appliances is a likely source of demand management. Individual customers will have the capacity to control their own usage or, more likely, will be able to empower their retailers (or another third party) to remotely optimise a portfolio of demand management technologies and share the financial benefits.

AEMO is increasingly looking to demand side responses as a tool in managing the network. In May 2017 it announced a pilot demand response initiative with the Australian Renewable Energy Agency to be trialled in South Australia and Victoria. The announcement indicated that the program would aim to secure 100 MW of demand response capacity by summer, before scaling up in coming years.[169]

Numerous other initiatives are being developed by retailers, network operators and third parties to take advantage of the opportunities offered by demand side response. For example, Energex has undertaken several initiatives, including offering customers a rebate on air-conditioners that have direct load control devices (effectively allowing Energex to manage temperature settings at peak periods). Over 70,000 air-conditioners with demand response capabilities have been rolled out in south east Queensland.[170]

For large customers, more sophisticated services are being offered through energy management systems. Advanced metering services and remote control of some plant equipment allows third parties to aggregate business loads and meaningfully reduce electricity demand at peak periods. This has the potential efficiency benefit of limiting the need for involuntary load shedding when insufficient supply is available.

While these technologies have the potential to improve market outcomes in the NEM, the rollout of these technologies needs to be enabled through flexible regulatory frameworks that both encourage innovation but also ensure that customers that are embracing these products and services are aware of the risks involved, including complex contracts and exposure to variable pricing.

168 Dr Alan Finkel AO, June 2017, p. 146.

169 AEMO, *ARENA and AEMO join forces to pilot demand response to manage extreme peaks this summer*, media release, 19 May 2017.

170 Energex, *Demand Management Plan 2017–18*, 2 May 2017, pp. 9, 18.

3.1.3. Increases in gas prices

Natural gas is an important source of fuel for electricity generation in Australia and is likely to become increasingly important for NEM reliability and affordability as existing coal technology is phased out. The recent tightening of demand-supply balance in wholesale gas markets and the resulting increase in wholesale gas price has impacted electricity prices in the NEM.

Box 3.4: Gas generation compared to other types

Gas generation is a key source of electricity production in the NEM. Like coal-fired stations, gas plants can be controlled and dispatched on command. However, gas powered generation has much faster start up and ramp up times than coal, which allows gas stations to respond quickly to changes in demand. Coal has an advantage in costs though; the natural gas inputs for generation are much more expensive than coal inputs (per MWh produced).

There are two main types of gas generation stations: open cycle and combined cycle. Open cycle stations contain only a gas turbine and are able to reach full generation capacity very quickly. Combined cycle stations contain a gas turbine and a steam turbine; the excess heat formed in the gas turbine is captured to heat water and turn the steam turbine. Combined cycle stations are slower to ramp up to full capacity but are more cost effective as more electricity is produced per unit of gas and so can operate similarly to coal plants in providing baseload power.

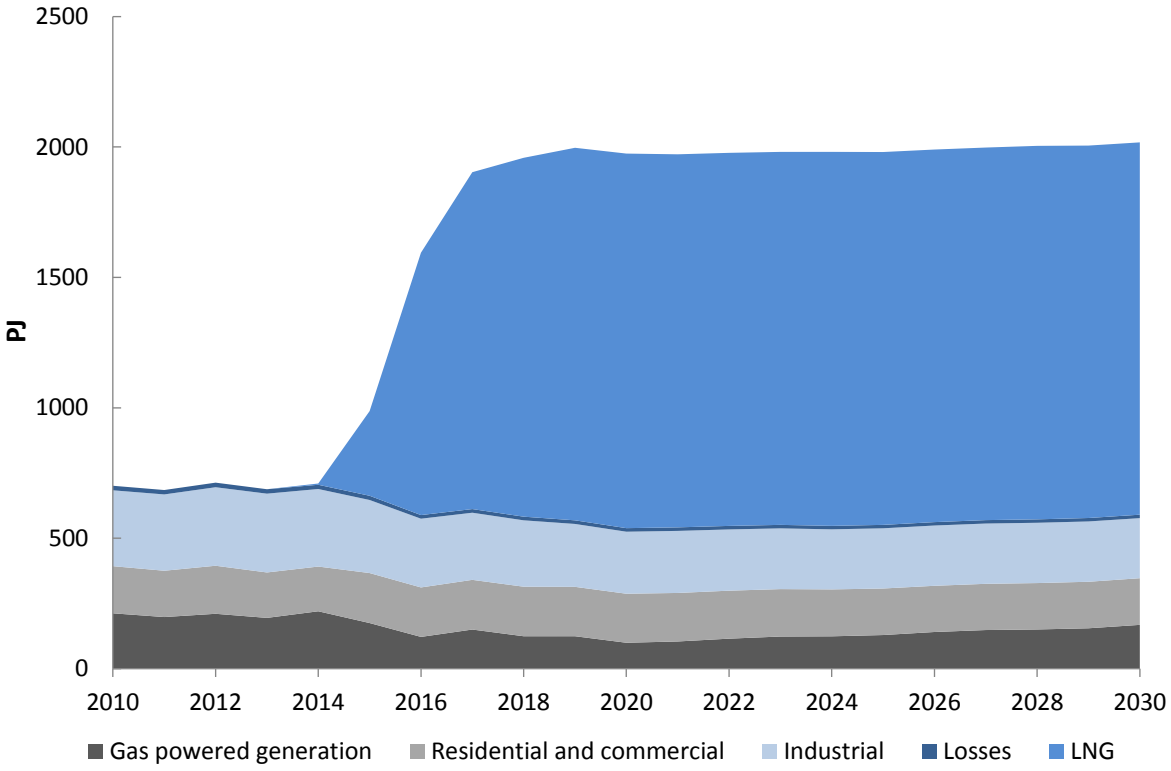
Hydroelectric plants are similar to gas in that they can ramp up quickly. Hydroelectric generators do not have a direct ‘fuel cost’ like gas and coal plants do, but output of hydroelectric plants is constrained by the level of their water reserves, which is dependent on rainfall in their dam catchment areas. Because of this limitation on their ability to generate, hydroelectric plants typically only operate when NEM prices are high.

Other renewable generation, such as wind and solar PV are intermittent generators that only produce electricity when conditions are conducive. They have zero fuel cost, which makes them very cost effective when they are generating. Gas generation complements intermittent renewables because gas can start up quickly when renewable output declines.

Tightening of demand-supply balance in wholesale gas markets

As shown in Figure 3.5, demand for gas in eastern Australia has nearly tripled in recent years as three major liquefied natural gas (**LNG**) export facilities in Queensland commenced operating (Queensland Curtis LNG, Gladstone LNG and Australia Pacific LNG).

Figure 3.5: Forecast eastern Australia gas demand



Source: AEMO, National gas forecasting report, December 2016

In 2017, Australia was the world's second largest LNG exporter, and is forecast to be the largest exporter in 2018.[171] The volumes required to supply the large LNG export contracts have exposed Australian domestic consumers (both residential and commercial) to global LNG prices.

All three major LNG projects were originally envisaged to source their gas requirements from their own reserves in the Surat-Bowen Basin. But the development of gas wells by Santos' Gladstone LNG project in particular has been slower than expected, causing significant disruption to domestic markets.

As domestic reserves have increasingly been drawn into LNG exports, some regions have experienced acute gas shortages and wholesale gas prices well above the LNG netback price (exacerbated in part by constrained or costly transport via pipeline infrastructure).

Most wholesale gas sales in eastern Australia are struck under confidential bilateral contracts, making wholesale gas prices relatively opaque. Gas contracts offered to electricity generators may also be different to what is offered to other C&I operators. In the ACCC's final report for the Inquiry into the east coast gas market, it observed average contract prices across basins were around $5 per gigajoule (**GJ**) up until 2010, and had risen to around

[171] AER, 2017 State of the energy market, p. 11.

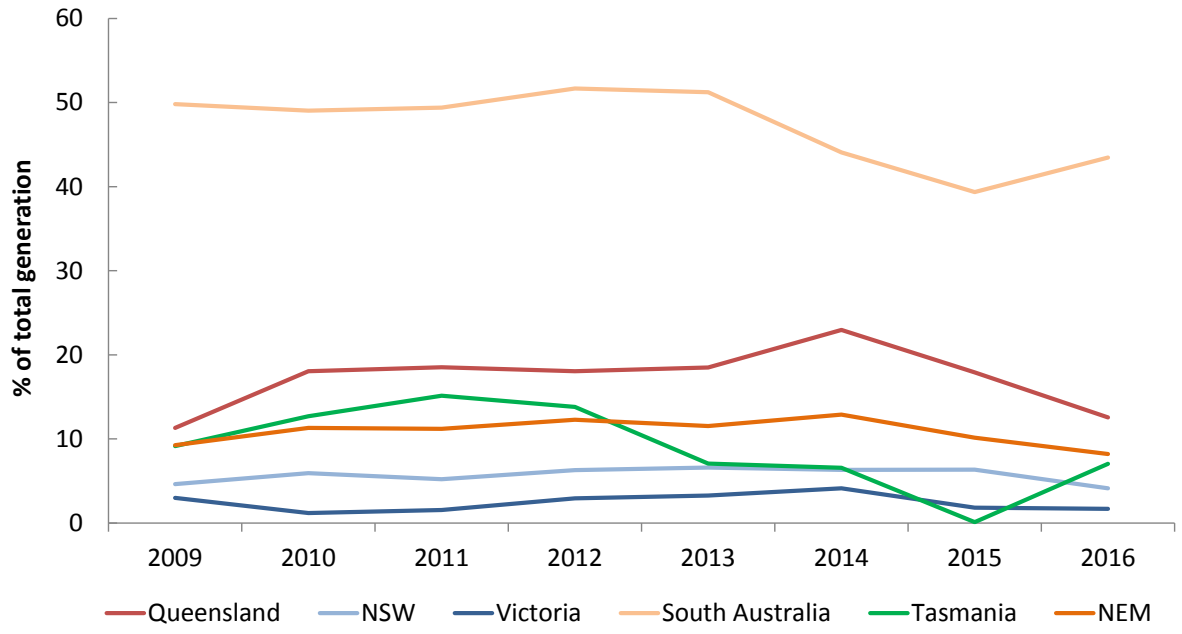
$8 per GJ in 2015.[172] While it is difficult to observe actual prices, it is clear that gas prices have risen sharply in recent years, with some market participants reporting that they had been quoted prices as high as $20 per GJ in early 2017;[173] but recent information suggests prices have eased since.

The ACCC's 2016 Inquiry into the east coast gas market also highlighted the real difficulties faced by many industrial users sourcing supply contracts and found that in the period from about 2012 to 2014 supply contracts (for the period 2016 and beyond) were often at sharply higher prices.[174] This issue was compounded in some instances by operators of gas pipelines charging monopoly prices to transport gas.[175]

Reliance on gas powered generation in the NEM

As illustrated in Figure 3.6 below, the reliance on gas powered generation for the production of electricity varies from state to state. South Australia is most reliant on gas powered generation with over 40 per cent of its generation capacity coming from this source. Overall in the NEM gas powered generation sits at just under 10 per cent of capacity, exposing a significant percentage of the generation market to increases in gas prices.

Figure 3.6: Gas powered generation capacity by state (%)



Source: AER, State of the energy market May 2017

These percentages understate the significance of gas generation in the wholesale market. Gas powered generators have a disproportionately large impact on wholesale electricity prices because they are often the marginal supplier (i.e. the last generator to add supply into a dispatch period) and therefore set the market price. Gas powered generators often end up being the marginal supplier because they can ramp up production relatively quickly compared to other generation sources, and have therefore been the preferred technology for meeting peaks in demand.

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172 ACCC, *Inquiry into the east coast gas market,* April 2016, p. 35.

173 Macdonald-Smith, A and Potter, B, *East coast gas shortages to hit this winter*, Australian Financial Review, 7 March 2017.

174 ACCC, *Inquiry into the east coast gas market,* April 2016, pp.1 and 18.

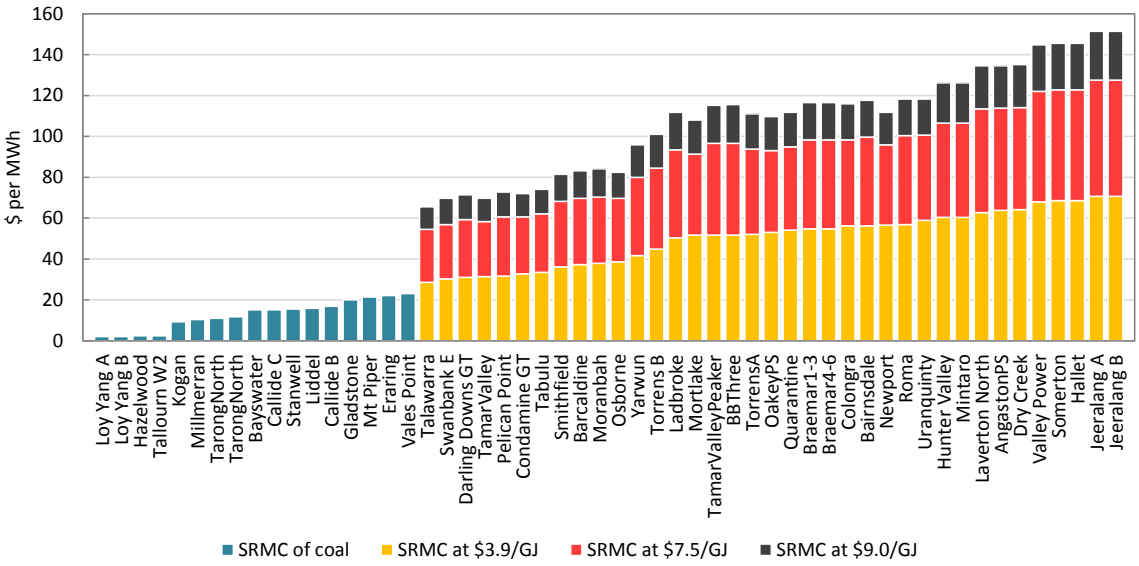
175 Ibid, pp.112 and 113.

South Australia's high reliance on gas generation leaves it particularly exposed to gas prices. Gas powered generators set the price in South Australia in approximately 35 per cent of trading intervals. This is well above the average across the NEM, where gas is the marginal supplier in 12 per cent of intervals.[176]

As set out in chapter 2, wholesale electricity prices in South Australia are the highest in the NEM. Between 2015–16 and 2016–17 average NEM spot prices in South Australia increased by over 80 per cent, and prices have remained high so far in 2017–18. While this is likely due to a range of factors, higher gas prices are a key contributor.

The Finkel Review reported on the extent of the interdependency between gas and electricity prices.[177] Figure 3.7 is a chart prepared by AGL which appears in the Finkel Review.[178] It shows the fuel cost of generating electricity when gas prices are $3.9 per GJ, $7.5 per GJ and $9.0 per GJ. A range of gas powered generators in Australia are presented, which vary in efficiency. The graph only includes the fuel cost of generation.

Figure 3.7: Indicative relative gas price impacts on generation fuel costs[179]



Source: AGL, AGL Investor Day 2016 presentation

These calculations show the dramatic impact that higher gas prices can have on the cost of generation and therefore on wholesale electricity prices—even at levels much lower than the $20 per GJ price being reported in early 2017.

Some operators of gas powered generation have opted to withdraw capacity in response to higher gas prices. A prime example is Stanwell Corporation's withdrawal of the Swanbank E Power Station in Queensland because it could earn more revenue from selling its gas rather than using it to generate electricity.[180] Following Queensland government intervention,

176 ACCC calculations, based on AEMO data.

177 Dr Alan Finkel AO, June 2017, pp .109-110.

178 Dr Alan Finkel AO, June 2017, p .111.

179 AGL, *AGL Investor Day 2016 presentation*, 14 November 2016, p. 89, cited in Dr Alan Finkel AO, June 2017, p. 111.

180 Stanwell Corporation Limited, *Gas – Swanbank E Power Station*, viewed 7 September 2017, http://www.stanwell.com/energy-assets/our-power-stations/gas/.

Stanwell Corporation has now sourced gas to enable Swanbank E to return to service from 1 January 2018.[181]

Other operators were unable to access sufficient gas. The ACCC is aware that one generator has not been able to secure a gas contract for the second half of 2017 or 2018 despite seeking offers from the market on a number of occasions, and was sourcing gas from spot markets instead. That generator has indicated that difficulties in securing gas supply for 2018 were creating challenges in managing forward positions and could adversely impact its ability to generate electricity over the coming summer peak demand periods.

In South Australia, one of Engie's two units at the Pelican Point power station in South Australia was mothballed in 2015 due to the unwillingness of suppliers to enter into long term gas contracts.[182] Following intervention from the South Australian government, Engie has entered into gas supply deals with Origin[183] from July 2017 to 2020, Shell for winter 2017[184] and Santos for 15 PJ, starting in January 2018.[185]

High gas prices are also impacting on investment decisions in the NEM. With coal being phased out by most generation businesses, dispatchable generation capacity will increasingly be reliant on gas powered plants. However, there is little, if any, committed private investment in gas powered generation, which likely reflects the current difficult supply environment and high gas prices. Without investment in reliable generation technologies in the short to medium term, wholesale electricity prices will become more volatile and the NEM may experience shortages of supply when weather conditions are not favourable for renewable generation sources. That said, at least one submission to this Inquiry suggests that the current high wholesale electricity prices have now reached a level that makes investment in new gas powered generation viable.[186]

The full impact of gas price increases may not be felt for some time as a number of generators would still be sourcing gas under existing contracts struck before price increases. That said, information available to the ACCC (including the information above) suggests that current high electricity spot prices mean that at least some gas powered generators are finding it profitable to operate even at the current gas spot market price. One vertically integrated retailer noted that it had made spot purchases on the gas market to run its gas generation plant harder to capture higher wholesale electricity prices.

Throughout the remainder of the Inquiry, the ACCC will further investigate the extent of the impact of gas prices on the current and likely future price of electricity taking into account the initial findings of the ACCC's current gas inquiry.

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181 Queensland Treasurer and Minister for Trade and Investment, *Stanwell and Shell seal the deal for Swanbank E gas supply*, media Release, 6 September 2017.

182 Engie, *Pelican Point to return to full capacity*, media release, 29 March 2017.

183 Origin Energy, *Origin works with Engie to help boost energy security in South Australia*, media release, 29 March 2017.

184 Shell Australia, *Shell seals more east coast domestic gas deals*, media release, 6 April 2017.

185 Santos, *Santos to redirect gas to South Australian economy*, media release, 14 August 2017.

186 EnergyAustralia, 30 June 2017 p. 5.

3.1.4. Potential for strategic conduct by large generators

The structural factors considered above are each likely to have had an impact on wholesale prices in the NEM in recent years. However, the ACCC considers that the conduct of generation businesses is also likely to have contributed to higher prices in the NEM.

These issues are not wholly separate from the structural issues discussed above. The behaviour of participants in a market will be framed by two particular characteristics:

- the structure of the market and in particular the degree to which any participants have market power, and
- the rules of trade that dictate participation in the market.

The highly concentrated nature of the wholesale market and the fact that a number of generation business are responsible for more than 30 or even 40 per cent of the generation dispatched in particular NEM regions is discussed above.

What are the rules?

As explained in Box 3.1 above, in the NEM, generators submit offers to AEMO to dispatch specified quantities of electricity at bid prices. Electricity is dispatched every five minutes, which means that generators are required to bid to supply electricity in five-minute blocks.

Accounts for the supply of electricity in each of the five NEM regions are settled every 30 minutes at a spot price which is the average of the six five-minute dispatch interval prices. The price for each five-minute dispatch interval is the most expensive bid dispatched. In each NEM region, all generators dispatched in a 30-minute trading interval are paid the same spot price per MWh dispatched for their region.

To assist AEMO forecast market prices, generators provide bids a day in advance. These bids can be adjusted (i.e. ‘re-bid’) any time before the relevant dispatch.

Can the rules be manipulated?

There has been a concern for some time that the rules allow for manipulation because large generators can submit re-bids late in a 30-minute period at a much higher price in order to drive up the average settlement price for that 30-minute period. Large generators are able to do this because their capacity is more likely to be critical to meet demand. That is, they control enough capacity that it is likely they will need to be dispatched regardless of the price they bid in.

It appears that conduct of this type can be timed to minimise the likelihood of competitive response from other generators; for example, strategically rebidding in the final five-minute trading period of a 30-minute block may create two benefits for a large generator:

- it could increase the average price paid for the whole 30 minutes of generation (as this is an average of the six five-minute periods), and
- other generators (such as peaking gas powered generators) are not induced to switch on and contribute generation because the price spike is over after one five-minute interval with a new 30-minute block starting after it.

In recent years, similar last minute rebidding has become more prominent in the first trading interval of the 30-minute block, with similar outcomes on prices.

It should be noted that in some instances re-bidding actually drives prices down, rather than up.

Previous attempts to address strategic bidding

The AER has previously tried to deter detrimental rebidding conduct using the NER. The NER previously stated that bids and rebids into the NEM must be made in good faith.

The AER instituted proceedings on 28 July 2009, alleging that Stanwell Corporation had breached the good faith provisions of the NER. The AER alleged that on particular days of extreme heat in Queensland in February 2008, Stanwell Corporation traders made a number of rebids that were not in good faith. Spot prices on those days had risen to over $9000 per MWh. Under the NER, the AER needed to demonstrate that Stanwell Corporation did not, at the time of the original bid being made, have a genuine intention to honour that bid, absent a change in material conditions or circumstances.

In August 2011, the Federal Court dismissed the AER's case.[187] The Court considered that material conditions or circumstances could include both objective data (such as a change in demand forecast) or a subjectively held expectation or belief (such as a lack of change in forecast dispatch price if one was expected). There was also no requirement that the expectation or belief was likely or reasonable.

In the AER's view, the Court's interpretation of the good faith bidding provision highlighted that the rule then in force did not provide the desired controls on behaviour anticipated when it was introduced, nor did it meet the high level policy objectives of the legislation.[188]

This led to the AEMC introducing a new rule which came into effect on 1 July 2016, which provides clearer guidance about appropriate generator bidding behaviour in the wholesale electricity market.[189] The rule amended the relevant provisions in the NER as follows:

- the requirement that bids be made in good faith was replaced by a prohibition against making false or misleading bids
- any variations to offers (i.e. rebids) will need to be made as soon as practicable after the material change in conditions that forms the basis of the rebid
- a requirement to preserve a contemporaneous record of the material conditions and circumstances surrounding late rebids was introduced. These records are to be made available to the AER on request.

When the AEMC was considering this proposed change, one of the big three retailers noted that "[c]hanges to the rules could limit commercial opportunities".

The effective enforcement of the new rule, however, requires the assessment of the bidding conduct (and the reasons for bidding behaviour) of specific individuals within the generation business. It is therefore important that the AER can access relevant information to make this assessment.

The AER has investigation powers under the NEL and can require generators to produce documents and provide information in relation to their bidding activities. Unlike many other enforcement agencies (including the ACCC), the AER does not have the power to require any individual involved in conduct to appear before it and give oral evidence. This is a significant deficiency in the AER's powers in this context.

The ACCC considers that in order for the AER to effectively investigate and deter unlawful conduct in the wholesale market, amendments should be made to enable the AER to require

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187 *Australian Energy Regulator v Stanwell Corporation Limited* [2011] FCA 991.

188 AER, *AEMC rule change – Bidding in Good Faith*, viewed 12 September 2017, https://www.aer.gov.au/publications/submissions/aemc-rule-change-bidding-in-good-faith.

189 AEMC, National Electricity Amendment (Bidding in Good Faith) Rule 2015.

individuals to give evidence before it, similar to the ACCC's powers under section 155(1)(c) of the CCA.

New proposals for reform

As discussed above, some strategic rebidding appears to be profitable because of the 30-minute pricing rule, whereby generators are paid the average of wholesale prices over a 30-minute period. The 2016 rule changes did not to address the incentives to strategically rebid that are created by the 30-minute pricing period.

This issue is, however, the subject of an ongoing reform process in which the AEMC is considering whether to align the price paid to generators with the settlement price of each five-minute trading interval. The change would require some reworking of systems, but may reduce the incentive to bid strategically.

On 5 September 2017, the AEMC released a draft rule change to this effect.[190] The draft determination proposes an extended transition period, with any final rule that reflects the draft rule to commence on 1 July 2021.

The AEMC has stated that "[a] market where the price provides signals and incentives for supply to be responsive to demand over the shortest timeframe practicable [that is, the five-minute interval], will drive more efficient wholesale market outcomes…A more efficiently functioning wholesale market will in turn provide the benefits of lower supply costs and lower retail prices for consumers."[191]

Another argument raised in favour of the rule change is that the innovation and investment incentives created by aligning dispatch and settlement at five minutes and creating an improved price signal are expected to lead to a more efficient mix of generation assets and demand response technologies, ultimately leading to lower costs. AEMO considers that this will benefit consumers when reduced wholesale electricity costs flow through to lower retail prices.[192]

The proposed rule change is not universally welcomed. For example, some market participants, including smaller retailers, have raised concerns that the rule change may lead to limited availability of 'cap' contracts. The importance of such contracts is discussed further in section 3.2.4 below.

The ACCC considers that, to the extent this rule change can limit any exercise of market power, it should be welcomed.

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190 AEMC, *Draft Rule Determination – National Electricity Amendment (Five Minute Settlement) Rule 2017*, 5 September 2017.

191 AEMC, *Directions Paper – Five Minute Settlement*, 11 April 2017, p. ii.

192 AEMC, *Draft rule determination – National Electricity Amendment (Five Minute Settlement) Rule 2017,* 5 September 2017, p. ii.

3.2. Retail

In many parts of the NEM the retail market is still transitioning from the former regime of regulated state monopolies to a competitive market. The initiative to privatise and deregulate retail electricity arose from the National Competition Policy reforms adopted in 1995. States were encouraged to privatise their publicly owned retail operations and to allow other private businesses to offer retail services (opening the retail market to competition is referred to as 'full retail contestability'). States retained price cap regulations for retail electricity but encouraged retailers to compete below the cap.

The move to full retail contestability was intended to bring the benefits of competitive markets to the electricity market; namely, greater choice for consumers, more product innovation, and lower prices. In time, the development of a competitive industry should make price regulation redundant. In 2009, Victoria was the first state to remove price regulation, with South Australia (2013), NSW (2014), and the South East Queensland region (2016) following. Regional Queensland, Tasmania, and the ACT retain price cap regulations, which are determined by local regulatory authorities. Figure 3.8 below illustrates the transition of retail markets across the NEM from regulation to competition.

Figure 3.8: Full retail contestability and price regulation by state

Source: Adapted from AEMC, Retail Competition Review 2016

3.2.1. What does the retail market look like today?

As retail markets have been opened up to competition, a large number of retailers have entered. Apart from regional Queensland, Tasmania and the ACT, all NEM regions have at least 19 active electricity retailers in 2017.[193]

Submissions from established retailers assert that there is very vigorous competition between electricity retailers.[194] Consistent with that, the ACCC's review of internal documents produced by retailers as part of the Inquiry revealed that retailers pay close attention to their competitors.

Despite this, retail electricity markets in the NEM remain very concentrated. As shown in Figure 3.9, AGL, Origin, and EnergyAustralia have at least 70 per cent of residential customers across the NEM (as well as in each of NSW, South Australia and south east Queensland). Even in the most mature de-regulated market, Victoria, the big three have over 60 per cent of residential customers.

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193 AER, 2017 State of the energy market, p. 138.

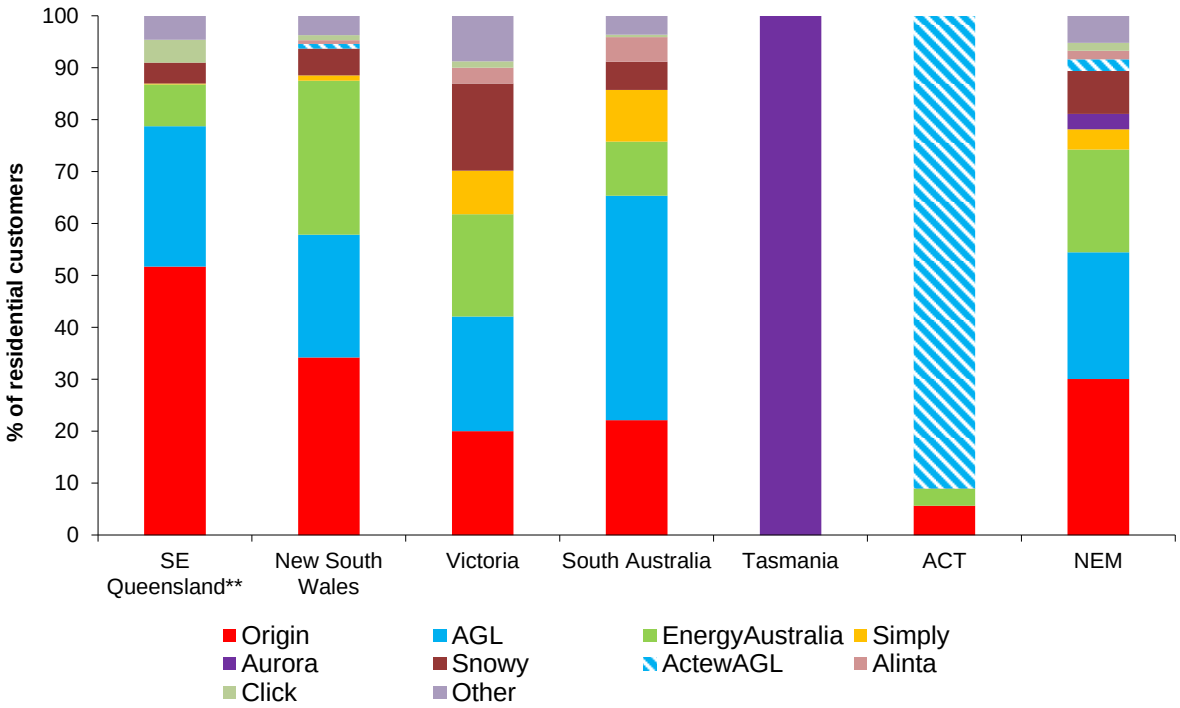
194 For example, AGL, 18 July 2017, pp. 22-23; Alinta, 30 June 2017, p.2; Origin Energy, 30 June 2017, pp.1, 3; Momentum Energy, 30 June 2017, p.5.

Other retailers have struggled to expand and gain significant market share. The next largest retailers are Snowy Hydro's retail brands Red Energy and Lumo Energy (a combined 7 per cent of residential customers in the NEM), and Simply Energy, which has around 3.6 per cent of residential customers in the NEM. Like the big three, both of these retailers are vertically integrated.

In Tasmania, the state-owned Aurora Energy remains the only retailer for residential customers and in the ACT, ActewAGL (a 50:50 joint venture between AGL and the ACT government), retains a near monopoly on residential customers. The small populations in these regions, and the continuation of regulated pricing, have likely reduced the attractiveness of entry for other retailers.

We note that Ergon Energy has been excluded from Figure 3.9 as it largely services regional Queensland and is subject to price regulation. The south east Queensland column represents the Queensland customer data minus Ergon Energy. This may slightly overstate the market share of retailers in south east Queensland as Ergon may also serve some customers in the region.

Figure 3.9: Retail Electricity Market Share (residential customers), March 2017*



Source: Queensland, NSW, South Australia, Tasmania and ACT: AER data, March 2017; Victoria: ESC, Victorian energy market report 2015–16
* Victorian data is for June 2016
** South east Queensland data has been calculated by subtracting Ergon customers from Queensland market share figures and rebasing percentages

The large market shares of the big three retailers across Australia raises concerns about the effectiveness of competition in retail electricity.

One sign that competition has so far failed to meaningfully challenge the large retailers is limited erosion of their market shares in the past five years. Since 2012, other retailers have won 7.5 per cent of small customer market share from the big three. These figures are reported in Table 3.1 below.

Table 3.1: Market share won/lost in the NEM since 2012, small customers

Retailer	NEM market share won/lost 2012–2017
AGL	–0.4%
Origin	–4.0%
EnergyAustralia	–3.1%
Others	+7.5%

Source: ACCC calculations using AER State of the energy market 2012 and AER data from March 2017. Victorian data is only up to June 2016.

While the 7.5 per cent gain in market share for smaller retailers is a positive sign, representing around 600,000 additional small customers now receiving their electricity from a smaller retailer, it is a relatively minor increase over a five year period, especially with at least 19 retailers now operating in south east Queensland, NSW, Victoria and South Australia.

3.2.2. What has been the impact of retail contestability on price and retail costs?

Price dispersion

There is no doubt that the introduction of retail contestability has benefitted some customers through lower prices. However, it has also resulted in greater price dispersion over time.

Price dispersion is not necessarily a bad outcome and can in fact be efficient when it reflects differentiation in the market catering to different consumer preferences.[195] This is discussed in further detail in chapter 4 below. However, in electricity markets, price deregulation and a move to dispersed pricing has not corresponded with differentiated products or services or significant product innovation to date (as discussed further below). It appears that customers paying the most for their electricity are not receiving additional services or specific benefits, but rather receiving services either equal to or less than those received by customers on competitively priced offers.

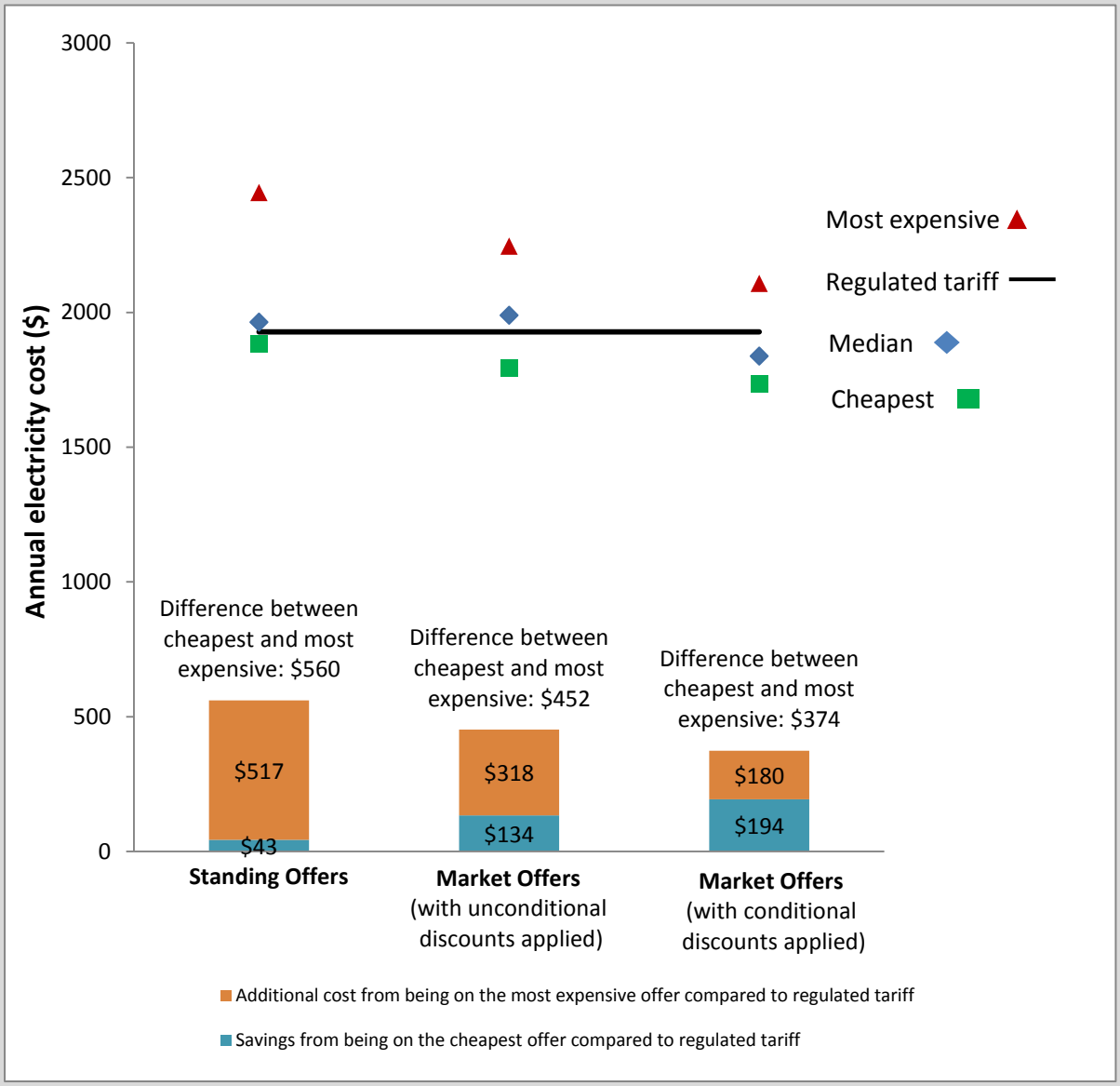
Queensland provides a useful case study to demonstrate this effect, which is detailed in Box 3.5 below.

Box 3.5: Deregulated prices in south east Queensland

Queensland provides a unique opportunity to observe the effects of electricity deregulation on the prices retailers charge consumers. Price regulation in south east Queensland was removed on 1 July 2016 but the QCA still sets a regulatory price for customers in regional Queensland that is based on the cost of supply in south east Queensland. It is therefore possible to compare unregulated prices in south east Queensland to the relevant regulated price in regional Queensland.

[195] See discussion in Simshauser, P and Whish-Wilson, P, *Price discrimination in Australia's retail electricity markets: An analysis of Victoria & Southeast Queensland*, Energy Economics Vol 62, February 2017, pp. 92-103.

Figure 3.10: Cheapest, most expensive and median offers in south east Queensland, June 2017*



Source: ACCC calculations based on residential offers available on the AER's Energy Made Easy website as of June 2017
*The chart does not include solar or 'greenpower' offers
**Based on the average Queensland annual electricity consumption profile (5793 kWh per year)

In Figure 3.10, offers available to residential customers in south east Queensland as of June 2017 have been categorised as:

- standing offers
- market offers with any unconditional discounts applied (i.e. discounts a customer automatically receives), and
- market offers with any conditional discounts applied (i.e. discounts a customer receives if they comply with a condition (to pay on time, for example).

A significant number of customers in south east Queensland are signed up to offers in each of these categories. In 2016, the AER estimated that 74 per cent of residential customers in south east Queensland were on market offers. Customers on market offers who are meeting their discount conditions will be paying bills in the third column. Some customers will be on market offers but unable to comply with these conditions and therefore only receiving any

unconditional discounts (middle column). The remaining 26 per cent of customers are on standing offers (first column). These customers are more likely to be disengaged or struggling to find a better offer for their needs.

Figure 3.10 shows the cheapest, most expensive and median offer for each of these categories for the average Queensland household. The annual cost of being on the regulated rate (only available in regional Queensland) is represented as a horizontal line.

At the bottom of the chart, columns show the additional cost to consumers of being on the most expensive offer compared to the regulated rate (in orange) and the benefit to consumers of being on the cheapest offer compared to the regulated rate (in blue). The difference in cost between the cheapest and most expensive offers in each category is also reported.

Figure 3.10 shows that prices vary considerably. Active customers can save money compared to the regulated rate (up to $194 per year for an average customer according to Figure 3.10). Many customers are likely to be taking advantage of these deals.

However, the price dispersion also increases the potential for customers to be paying more than they need to be. It is notable that for customers who do not receive conditional discounts, the median market offer is above the regulated rate. And even for customers on market offers who receive all conditional discounts, it is still possible to be paying $180 more than the regulated rate.

Inactive customers who stay, or are put, on a standing offer may be paying up to $517 more than the regulated rate (and more than $700 more than the cheapest market offer).

These are substantial differences in price outcomes for what is a largely homogenous service.

Increases in retail costs

Chapter 2 identifies that, based on information provided by retailers, between 2007–08 and 2015–16, retail costs increased by around 50 per cent in real terms. This is the key period for the introduction of retail competition across the NEM, and raises questions about whether introducing competition has achieved its goal of delivering a more efficient retail market that delivers benefits for electricity users. It also suggests that barriers to effective competition remain in these markets.

Across the NEM in 2015–16, the retailer gross margin accounted for 24 per cent of the residential bill on average, being 16 per cent retail costs and 8 per cent EBITDA net margin. The retail costs include costs to serve customers (such as billing costs) and costs to compete (that is, costs to acquire and maintain customers). As chapter 2 notes, on a NEM-wide basis the larger increase in the period 2007–08 to 2015–16 has been in retail costs, not retail margin.

Chapter 2 also highlights that across the NEM, the highest retail costs are in Victoria (the jurisdiction with full retail competition for the longest period in time) and the lowest are in Tasmania where retail electricity prices are regulated. It is also notable that Victoria has the highest costs to acquire customers of all the NEM regions.

3.2.3. What has been the impact of retail contestability on innovation?

As electricity is a homogenous product, innovation at the retail level is focused around service, tariff structures, and complementary bundles of products.

The ACCC has received a range of views on the level of innovation among electricity retailers. The Consumer Action Law Centre (**CALC**) considers there has been very little innovation in Victorian market offers.[196] Retailers on the other hand submit there has been significant innovation.[197] This view is supported by IPART.[198]

A number of retailers now offer customers different types of bills, including fixed costs plans and pre-paid options. Many retailers also offer consumers products and services such as rooftop solar, battery storage, and smart meter installation which in turn could see greater expansion of demand side services and peer-to-peer trading in retailer service models. These are positive developments.

The AEMC also found in its 2017 Retail Energy Competition Review that most retailers have introduced a variety of measures, including:

- expansion of their pricing options to offering non-price incentives or services (for example, delivering services through online channels, offerings that enable consumer choices about how to manage consumption, offers of demand response and the ability to manage consumption during peak energy periods)
- offers of energy generation and consumption (for example, grid power, green power, solar panels)
- tools to manage consumption (for example, energy saving advice and devices, batteries and 'intelligent' energy management software).[199]

However, the vast majority of consumers are still on a standard tariff comprised of a fixed daily charge and a variable usage charge, and most retail products and marketing are focused on pay on time discounts. This dynamic suggests that for the majority of customers, retail innovation has not delivered substantial improvements that help them manage their usage or materially improve the way they access energy.

The ACCC acknowledges, based on its review of internal retailer documents, that some more innovative approaches are being developed and may provide further innovation in the near future.

3.2.4. Why is competition not delivering better outcomes?

As noted above, some consumers have benefitted from the removal of regulated pricing and the introduction of competition in the retail supply of electricity. A key focus of this Inquiry is, however, to understand why competition is not operating to, in particular, better drive down or constrain retail costs (as well as prices). The ACCC acknowledges that moving from state-owned monopolies to a market open to competition does bring with it costs to win and retain customers. What is less clear is why, for example, after a period of almost ten years of price deregulation and full retail contestability in Victoria, the retail component of customer bills continues to increase.

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196 CALC, *Submission to ACCC Issues Paper*, 3 July 2017, p. 8.

197 *For example, AGL, 18 July 2017, p. 23; Origin Energy, 30 June 2017,* pp. 4, 28; EnergyAustralia, 30 June 2017, pp. 19-21; Momentum, 30 June 2017,p .5.

198 IPART, *Submission to ACCC Issues Paper,* 17 August 2017, p. 3.

199 AEMC, 2017 Retail Energy Competition Review, 25 July 2017, pp. 130-133.

The combination of high concentration and increased retail costs suggests that competition is not yet as effective as it can be. In trying to understand why this might be the case, the ACCC is assessing the extent of barriers to entry and expansion for electricity retailers.

Many retailers in their submissions to the ACCC, and even in internal documents produced to the ACCC, have suggested that either there are no barriers to entry or expansion, or that any barriers are low.[200] Notwithstanding that view, the ACCC considers that there are aspects of the retail market that warrant consideration.

Impact of vertical integration

The ACCC is considering the extent to which vertical integration between the retail and wholesale levels of the supply chain is limiting the ability of smaller retailers to compete.

As noted in section 3.1.1 above, there is significant vertical integration in the electricity supply chain between retailers and generators (gentailers). AGL, Origin and EnergyAustralia supply around 70 per cent of retail electricity customers in the NEM and now control around 48 per cent of the generation capacity.[201] Other vertically integrated businesses include Snowy Hydro (with its Red and Lumo retail brands) and Engie (with its Simply retail brand).

Some NEM regions have much higher levels of vertical integration than others. In NSW, Origin, Energy Australia and AGL now supply approximately 90 per cent of retail customers and control 62 per cent of generation capacity, and more on an energy dispatched basis.

Following the retirement of the Hazelwood plant in March 2017, the big three retailers control 64 per cent of generation capacity in Victoria, while also each supplying 19–27 per cent of retail electricity customers. Snowy Hydro has 23 per cent of generation capacity and supplies 16 per cent of electricity customers in Victoria.[202]

In South Australia, AGL supplies 48 per cent of retail customers and controls 42 per cent of generation capacity.

Vertical integration is less evident in Queensland and Tasmania where the majority of generation capacity is controlled by state-owned corporations.

Chapter 2 explains that retailers face significant risks as a result of the volatility of prices in the wholesale market. Retailers typically protect themselves against this risk by entering into financial ‘hedge’ contracts such as swap and cap contracts in respect of some or all of their anticipated retail load. These can be either OTC products where counterparties directly contract with each other or exchange traded products (traded on the ASX).

As also noted in chapter 2, vertical integration provides retailers with a natural hedge against market volatility, potentially eliminating or minimising their need to purchase OTC or exchange traded hedging products.

The existence of vertical integration also has the direct effect of limiting the pool of potential generation counterparties for retailers to contract with, and/or the volumes of exchange-traded product available.

Without access to sufficient hedging products at an appropriate price, non-vertically integrated retailers (or those with minimal generation capacity) will be limited in their ability to compete in a particular market. In its submission to the Inquiry, Alinta Energy stated that “a

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200 EnergyAustralia, 30 June 2017, pp. 2, 14; Momentum 30 June 2017, p. 5, AGL, 18 July 2017, p.23.

201 AER, 2017 State of the energy market, p. 47.

202 AER, 2017 State of the energy market, p. 142.

lack of liquidity in contract markets significantly impacts non-vertically integrated retailers and creates barriers to market entry and expansion."[203]

The ACCC has previously considered this issue in respect to NSW when it sought (unsuccessfully) to oppose AGL's acquisition of the state-owned Macquarie Generation in 2014. Further details are provided in Box 3.6 below.

Box 3.6: Vertical integration in NSW

Before privatisation, around 90 per cent of NSW's generation capacity was publicly owned. Today over 80 per cent of the electricity dispatched in NSW is generated by the three largest retailers. AGL alone accounted for 40 per cent of electricity dispatched in 2016–17.

One major generation asset to be privatised was Macquarie Generation which represented 27 per cent of generation capacity in NSW. In 2014, AGL was the successful bidder. At the time, AGL accounted for around 24 per cent of retail customers in NSW.

The ACCC had serious concerns about the impact of the proposed acquisition on competition. In March 2014 it announced its opposition to the acquisition on the basis that placing a large proportion of the state's generation capacity in the hands of a large retailer would result in higher generation prices and reduced liquidity in secondary markets such as hedging contracts for other retailers. AGL subsequently sought authorisation from the Australian Competition Tribunal (the **Tribunal**) for the acquisition, which the Tribunal granted in June 2014. Further detail on this case is included in appendix 4.

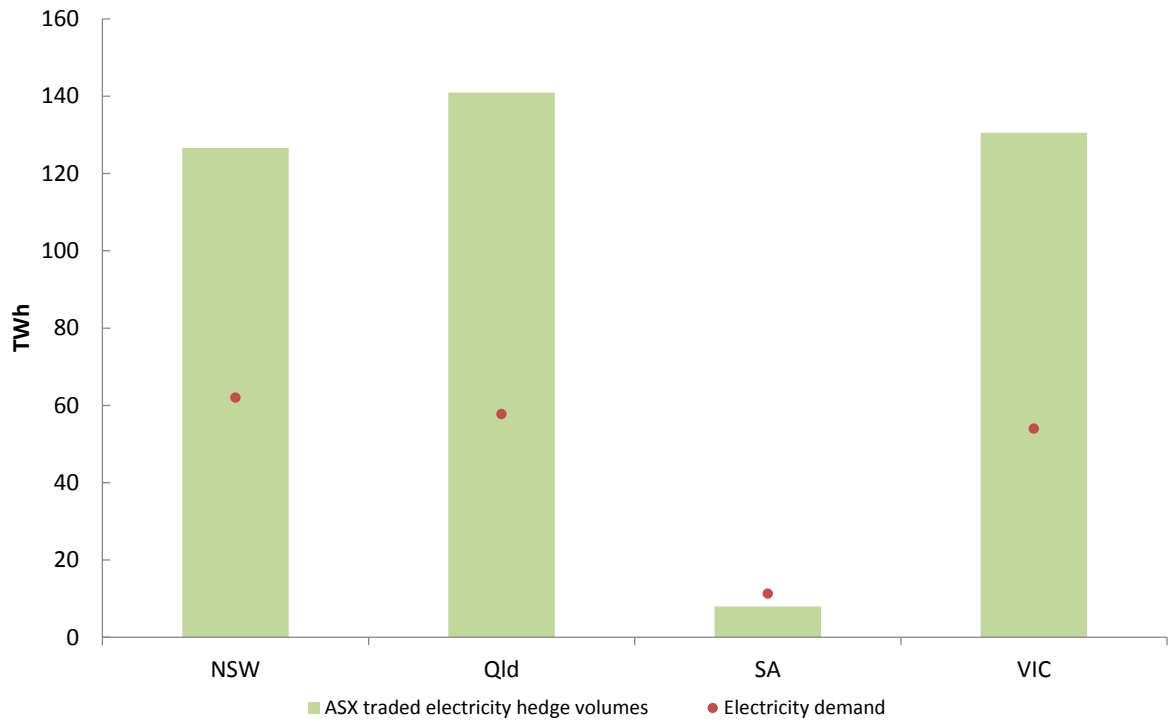
Limited access to hedging products appears to be a significant concern in South Australia. The ACCC is also aware of at least one retailer which has chosen not to enter SA due to contract liquidity issues. A number of retailers have indicated to the AEMC that there is limited access to competitively priced risk management products, and that this is a barrier to entry, particularly in South Australia.[204]

Figure 3.11 clearly demonstrates the lack of liquidity in the South Australian market. It has only a very small volume of hedging contracts traded as compared to other NEM regions. The volume of hedge contracts traded in South Australia has averaged less than two-thirds of underlying market volumes, compared to trades more than double underlying market volumes in other regions.

[203] Alinta Energy, 30 June 2017, p. 5.

[204] AEMC, 2017 Retail Energy Competition Review, p. iv.

Figure 3.11: Annual contract trade volumes and NEM turnover, 2014–2016 average



Source: ACCC calculations based on ASX electricity contracts data and AEMO electricity dispatched data

Overall there are concerns that the market is tightening. In its submission, Sumo Energy stated that "the market for wholesale electricity hedges is becoming less competitive."[205]

Recent retirement of generation assets (for example, Engie's Hazelwood facility in Victoria and Alinta's Northern Power station in South Australia) is likely to have further reduced availability of hedging products. To the extent that new generation is replacing these retired thermal plants, it is largely renewable generation which does not offer the same hedging services for retailers.

Most new generation capacity is in renewables and to the extent it is independently owned (i.e. not by a vertically integrated player) the dominant industry practice is for the project developer to sell their generation capacity upfront through a power purchase agreement (**PPA**). This eliminates the risk for the new generation facility, and the ACCC understands that most new generation requires a PPA to obtain financing.

As the investors and those financing these ventures are seeking to minimise as much risk as possible, it is difficult for small retailers who are not part of a larger corporate group to satisfy the required risk profile to enter into a PPA. As a result, while some smaller retailers who are part of large groups may have the financial backing to be able to access PPAs, in many instances it is the large vertically-integrated retailers, who are able to take advantage of PPAs. The ACCC understands that the electricity pricing available under PPAs is at a significant discount, providing a further advantage to larger market participants. These PPAs also usually include the LRET certificates produced by those generators, limiting the options for other retailers to acquire the certificates they require (and likely increasing the price of those that are traded).

[205] Sumo Power, *Submission to ACCC Issues Paper*, 30 June 2017, p.8.

Sumo Power also indicates that hedging opportunities provided through long term off-take agreements with new entrant intermittent generation are usually "incompatible with a new entrant retailer's risk management strategy."[206]

The ACCC notes that new initiatives in demand side response will provide alternative hedging products for retailers,[207] but this will not be a short term solution to the issues identified above.

Other barriers to entry or expansion

As noted above, a number of retailers report that barriers to entry and expansion are low. That said, a number of submissions to the Inquiry do identify a range of factors that may be hampering the entry or expansion of smaller retailers in the market (in addition to those discussed above).

Costs of entry and expansion

Retailers have identified that they face significant costs on entry and when looking to expand. For example, there are significant costs to acquire new customers given the reliance of new entrants on direct marketing to win customers. The cost of direct marketing and sales is typically incurred upfront.[208]

Prudential costs to meet AEMO requirements are also significant[209] and continue to increase as retailers grow in size.

Economies of scale

As with many other markets, smaller retailers lack scale and therefore have higher costs to serve per customer.[210] Certain costs of operating a retail business are likely to be relatively fixed (for example, the cost in setting up a billing system or developing a marketing strategy). For a smaller retailer, these costs must be shared across fewer customers, which affects the retailer's ability to offer competitive prices.

Economies of scale are also likely to affect the ability of small retailers to access important inputs, such as wholesale energy contracts and hedging products. Some small retailers indicate that they have trouble accessing bespoke hedging instruments due to their size – products may not be available that cater to small retailers. While electricity derivatives are traded on the ASX, smaller retailers often have limited working capital and may be unable to support ASX margin obligations.

Market behaviour of established retailers

A number of smaller retailers have indicated to the ACCC that the market conduct of the more established retailers has significantly impeded their ability to gain market share.

Most commonly these smaller retailers point to the very aggressive strategies used by these retailers to either 'save' a customer who has signed up with an alternative retailer, or to win the customer back a short time after they have switched.

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206 Sumo Power, *Submission to ACCC Issues Paper*, p. 9

207 AEMO, *Demand side participation, key insights*, viewed on 15 September 2017, https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Electricity-Forecasting-Insights/Key-component-consumption-forecasts/Demand-side-participation.

208 Sumo Power, 31 July 2017, p. 5.

209 Enova Energy, *Submission to ACCC Issues Paper*, 3 July 2017, p. 4.

210 Enova Energy, 3 July 2017, p. 7.

Increasingly aggressive customer retention and win-back activity has meant that many customers will cancel their decision to switch or switch again within their first few months with a new retailer. One smaller retailer estimates that it loses up to 25 per cent of its new customers to retention or win-back strategies. The ACCC understands that some retailers may experience even higher losses from time to time.

The costs for smaller players to win a new customer are significant. Such a high 'loss' rate increases these costs even further as the costs need to be spread across only those customers who are successfully acquired.

The offers customers are receiving when their retailer tries to win them back are often off-market offers – that is they are better than any of that retailer's advertised rates.[211] At least one of the big three retailers has what it calls a "back pocket" discount which is a higher discount call centre staff can use to try and retain a customer. While this means that those customers benefit financially from their decision to remain with or return to their previous retailers, this lack of transparency makes it hard for smaller retailers to compete. Smaller retailers may also be unable to compete with the size of discounts or cash rewards made with retention offers by larger retailers.

Some have called for limitations to be imposed on retailers' retention strategies. In its submission, the Public Interest Advocacy Centre recommended that the ACCC consider whether win-back practices are in the long term interests of consumers or should be "disallowed to remove a barrier to market entry for new retailers".[212]

Mojo noted in its submission to the Inquiry that win-back offers should be deemed 'generally available' offers under the AER's Retail Pricing Information Guideline which would require those offers to be published to ensure that customers have information on the best offers available.[213]

Sumo Energy recommended the following measures:

- a code of conduct on retention activity that limits the number of times and the method(s) by which a retailer can contact a customer for retention purposes; or
- a ban on retention and win-back activity, except where the customer opts in to receive win-back calls from their previous retailer.[214]

In New Zealand, the Electricity Authority had concerns that win-back and 'saves'[215] strategies could be limiting the growth of retail competition. Since 12 January 2015, a 'switch saving protection' regime has been in effect. It allows a retailer that gains a new customer to elect to be protected from saves initiated by the retailer that lost the customer. However, the losing retailer will still be able to save a customer by offering an inducement if the customer initiates contact with that trader prior to the switch being complete. A retailer that elects to have 'switch saving protection' is prohibited from carrying out saves itself, unless the customer initiates the contact. The regime does not restrict win-backs; that is, the losing retailer can still attempt to persuade a customer to return after a switch is completed.[216]

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211 Mojo Power, *Submission to ACCC Issues Paper*, 3 July 2017, p. 3.

212 Public Interest Advocacy Centre, *Overpriced and underwhelming: a retail market that has failed consumers*, 5 July 2017, p. 16.

213 Mojo Power, 3 July 2017, p. 3.

214 Sumo Power, 30 June 2017, p. 8.

215 In the retail electricity market, a save occurs when a losing trader persuades a customer to cancel an incomplete switch to a gaining trader.

216 New Zealand Electricity Authority, *Switch saving protection scheme*, viewed on 15 September 2017, https://www.ea.govt.nz/operations/retail/retailers/switch-saving-protection-scheme/.

The Electricity Authority's post implementation review of saves and win-backs in August 2017 found that as a result of the scheme, the number of saves fell but the number of win-backs increased. The Electricity Authority concluded that the scheme has had no discernible effect on retail competition. [217]

Regulatory environment

Regulatory divergence, and ongoing uncertainty, across the NEM may be impeding the efforts of smaller retailers to expand their presence across the NEM. Alinta noted in its submission to the Inquiry that current regulatory divergences between the NEM states may hamper retailers' ability to achieve economies of scale within the NEM and therefore deliver the lowest prices to customers.[218]

Those divergences appear poised to widen in the near term, for example as the Victorian government is considering a range of recommendations that will, if implemented, increase the regulatory differences between Victoria and the rest of the NEM.

Smaller retailers have also indicated that fixed compliance costs are a significant burden on new entrants and small retailers. For example, Enova has pointed to a range of concerns including complex regulatory requirements on the retailer/customer interface and the need to have a financial services licence even when trading is purely for hedging purposes.[219]

3.2.5. Markets with limited competition

Despite retail contestability being in place throughout the NEM, most electricity customers in Tasmania and regional Queensland do not have an effective choice of retailer. The AEMC has identified barriers to retailers entering these markets including continued price regulation, the relatively small size of the Tasmanian market, and the uniform tariff policy in regional Queensland.[220]

In Tasmania, Aurora is the only retailer with offers for residential customers. For small businesses, ERM Power has entered in recent years to offer an alternative to Aurora.

In regional Queensland, Ergon Energy supplies customers under a regulated offer. The price of this offer reflects the cost to supply a customer in south east Queensland, which is below the typical cost to supply a regional Queensland customer. Ergon Energy receives a subsidy through the uniform tariff policy to cover these additional costs of supply. Other retailers cannot access this subsidy and are therefore unable to make competitive offers to these customers. The Queensland Productivity Commission found that expanding the subsidy under the uniform tariff policy to all retailers is the only practical way to facilitate retail competition in regional Queensland, but that doing so would impose increased costs on the state budget.[221]

Surveys by the AEMC and Energy Consumers Australia found that most customers in these markets were dissatisfied with the level of choice of offers, and the value for money of those electricity offers.[222] This concern about value for money presents a significant challenge to

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217 New Zealand Electricity Authority, *Post implementation review of saves and winback: Final Report*, 29 August 2017. pp. ii, 31.

218 Alinta Energy, 30 June 2017, p. 2.

219 Enova Energy, 3 July 2017, p. 4.

220 AEMC, 2017 Retail Energy Competition Review, pp. 24-25..

221 Queensland Productivity Commission, *Electricity Pricing Inquiry Final Report*, 31 May 2016, p. 241.

222 AEMC, 2017 Retail Energy Competition Review, pp. 184, 187; Energy Consumers Australia, *Energy Consumer Sentiment Survey Findings, National*, December 2016, p. 5; Energy Consumers Australia, *Energy Consumer Sentiment Survey Findings, Tasmania*, December 2016, pp. 3-4; Energy Consumers Australia, *Energy Consumer Sentiment Survey, Queensland*, December 2016, pp. 3-4.

any efforts to stimulate competition in these markets, as regulated prices would, as highlighted above, likely need to increase in the short term to attract new entrant retailers.

3.3. Networks

As noted in chapter 2, network costs are the largest component of average household electricity bills. They accounted for 48 per cent of the amount billed to residential customers in the NEM in 2015–16. Transmission and distribution networks are regulated monopolies. The AER sets the amount of revenue that network operators are allowed to recover from customers in accordance with rules set by the AEMC. These rules allow network operators to recover their efficient costs and an appropriate return.

The analysis in section 2.3 illustrates that network costs rose significantly between 2009 and 2015. While investment in transmission and distribution assets was made to maintain reliability and security of supply, there is evidence to suggest that customers have not received value for money from these investments. That is, the additional network costs have not fully balanced the objectives of safety and reliability with the price of increased network investments.

This section explores the key drivers of the increases of network costs, in particular:

- costs of meeting regulatory obligations and reliability standards
- costs associated with underutilised assets
- costs arising from the previous NER, which was highly prescriptive in nature and limited the AER's discretion in its assessment of businesses' regulatory proposals
- the effect of the regulatory framework for setting network revenue, including limited merits review.

Box 3.7: Efficiency of electricity networks

The AER's economic benchmarking analysis shows that the relative efficiency of electricity networks has decreased over time. The AER measures the relative productivity of networks over time using a multilateral total factor productivity approach that assesses the volume of inputs needed to produce outputs. The decline in productivity has been more pronounced in distribution networks than transmission networks.[223]

The Queensland Independent Review Panel also noted that privately owned networks in Victoria and South Australia have been consistently more efficient than the state-owned networks in Queensland and NSW.[224] In a review of NSW and Queensland labour for AER determinations, Deloitte Access Economics found that distribution networks in these states had inefficient labour costs.[225] The AER in its most recent 2014–19 NSW determinations removed inefficient labour costs from its operating expenditure allowance. Network operators in NSW and the ACT successfully appealed the AER's decision and the AER is currently reconsidering this issue. Further, appeals by network operators for the Victorian and South Australian networks are ongoing.

[223] AER, 2017 State of the energy market, p. 117.

[224] Queensland Government, *Independent Review Panel on Network Costs, Electricity Network Costs Review*, Final Report, June 2014, p. 102.

[225] Deloitte Access Economics, *NSW distribution network service providers labour analysis*, April 2015, p. ii; Deloitte Access Economics, *Queensland distribution network service providers – opex performance analysis*, 24 April 2015, p. viii.

3.3.1. Regulatory obligations

In addition to economic regulation overseen by the AER, electricity network operators must comply with other regulatory obligations. These include technical regulations for safety standards, and jurisdictional regulations for licence conditions. These regulatory obligations may not obviously or directly benefit electricity customers as they often address specific technical matters. However, these regulations are important to meeting broader objectives like worker or community safety. Electricity network operators need to continually invest in network infrastructure to ensure that they meet their regulatory obligations and customers receive electricity services with minimal disruption. The costs are then passed through to the customer. While consumers value a high level of reliability, concerns have been raised to the ACCC that too much emphasis has been placed on greater network investment with limited regard to the impact that this has on retail prices.[226]

Box 3.8: Reliability standards in NSW and Queensland

State governments are responsible for setting the reliability standards that network operators must meet. Reliability standards across the NEM have historically been set at a high level to seek to protect customers from the cost and inconvenience that results from supply interruptions, excepting unavoidable events like outages from extreme weather. For some consumers, particularly large industrial consumers, reliability is essential to the viability of their operations. However, high standards of reliability come at a price to all customers in the form of higher network costs.

The issues identified above are common in each state. However, the NSW and Queensland networks, fully or partly owned by their respective state governments, saw the largest increases in network costs across the NEM.

A significant driver of network costs in NSW and Queensland from 2009 was the need to meet more stringent reliability standards. Each jurisdiction sets their own reliability requirements and this has resulted in different methodologies by distribution networks to maintain or improve reliability. The NSW and Queensland distribution networks adopted input based methodologies that required significant investment. This was in contrast to Victoria which placed more emphasis on reliability outcomes and the value customers place on reliability. More prescriptive reliability requirements reduce the flexibility for distribution businesses in meeting their reliability standards.

There have been a number of reviews which found that NSW and Queensland customers paid more than they should have due to unnecessarily high reliability standards. For example, the AEMC in its 2012 review of distribution reliability outcomes and standards found that NSW customers would benefit from reducing the level of reliability as the cost savings to customers would exceed the costs of poorer reliability outcomes. Equally, the Independent Review Panel on Network Costs in Queensland noted reliability requirements have resulted in excessive capital expenditure in Queensland networks.[227]

The ACCC agrees that unnecessarily high reliability standards have led to consumers paying too much for electricity. However, much like the overinvestment in infrastructure that occurred between 2006 and 2013, the assets built to meet the higher earlier standards remain and customers continue to pay for these assets.

[226] Energy Consumers Australia, July 2017, p. 5.

[227] Queensland Government, June 2014, p. iv.

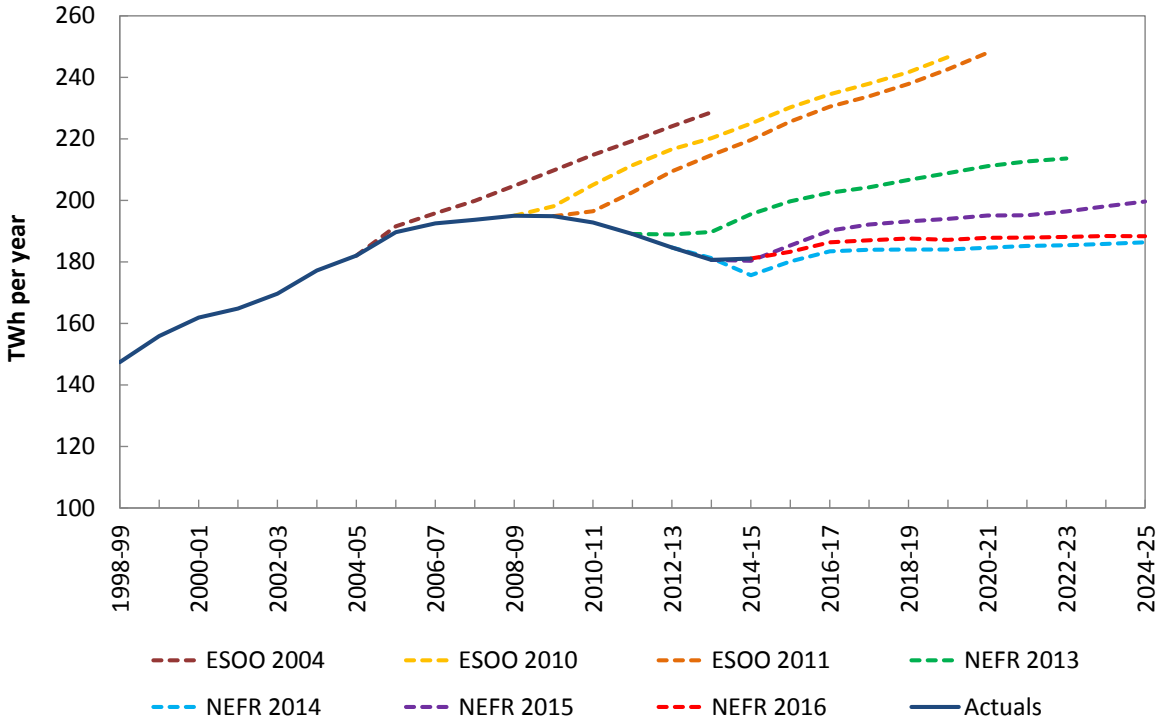
Victorian distribution networks also incurred costs related to the mandatory rollout of smart meters from 2009 to 2015. The AER estimated that the network operators spent $2.5 billion on the rollout, with $2.3 billion approved to be recovered from customers.[228] The rollout increased network charges for a typical customer by around $80 from 2010–12, with further increases of $9–21 per year from 2012–15.[229] The costs associated with the rollout will continue to be recovered through to 2020 for some networks in Victoria.[230]

3.3.2. Underutilised assets

Increased network investment was a large contributor to the growth in network costs over the past decade. A network operator's investment depends on a variety of factors including network age and technology, load characteristics, the demand for new connections, and licensing, reliability and safety requirements. In setting revenue allowances for network operators, the AER assesses each of the network operators' regulatory proposals. The network operators base these proposals on forecasts using the best information available at the time.

Demand forecasts since 2004 have consistently overestimated the growth in network demand. Figure 3.12 below shows the difference between forecast (Electricity Statement of Opportunities (**ESOO**) and National Electricity Forecasting Report (**NEFR**))[231] and actual demand over this period.

Figure 3.12: Difference in actual and forecast demand



Source: AEMO electricity consumption forecast data

228 AER, *State of the Energy Market* 2015, 24 February 2016, p.78.

229 AER, 2015 State of the Energy Market.

230 AER, Final Decision, *Advanced metering infrastructure*, Transition Charges Applications, December 2016, p. 5.

231 AEMO publishes annual electricity demand forecasts for the NEM. The NEFR, released until 2016 (replaced by Electricity Forecasting Insights) provides a 20 year outlook of demand. The ESOO forecasts the supply-demand balance for a ten year horizon. These forecasts are intended to help AEMO, government, and stakeholders make informed decisions about the future of the NEM.

As networks operate under an ex ante regulatory framework (based on forecasting and not actual results), there is limited scope to subsequently adjust for incorrect forecasts. This means that, if a network builds an asset that is not utilised, it can still continue to receive a return on its investment over the life of the asset. For example, the AER's 2009–14 AusGrid determination provided for capital investment to meet an expected increase in maximum demand from 5,500 to 6,700 megawatts. However, actual maximum demand did not exceed 6000 megawatts,[232] and the provision for investment in the network was proven to be unnecessary but AusGrid is still able to recover the costs of this investment.

This is not an isolated case. Overall capacity utilisation in the NEM has declined from 56 per cent in 2006 to 45 per cent in 2015.[233] However, there is a divide in capacity utilisation between the privately owned distribution networks in Victoria and South Australia (65 per cent) and the remaining networks which are state-owned or partially state-owned (43 per cent).[234] While capacity has decreased, network operators are still able to recover their costs and electricity customers across the NEM have been paying for assets they do not require.

Financing costs

As network assets can have an asset life of up to 50 years, over-investment has a long term impact on retail bills. This impact is exacerbated during periods of high financing costs. Network revenues are sensitive to the cost of capital that networks earn on their regulated assets. For example, a 1 per cent increase in the cost of capital for the AER's 2014–19 Endeavour Energy determination would have increased Endeavour Energy's revenue by over 8 per cent.[235] A significant driver of the recent decreases in revenue seen in Figure 2.33 in chapter 2 is a decrease in financing costs. The AER's 2016 determinations[236] for the Victorian distribution networks reflected a financing cost of around 6 per cent, which is significantly lower than the Tribunal's decisions between 2008 and 2010, which reflected a financing cost for some network operators of over 10 per cent.[237]

Incentive to over-invest

As network operators receive a guaranteed return on their assets, there is an incentive to invest in more assets which can lead to over-investment if the rate of return is set too high. Further, network operators are less likely to seek alternatives to investing in new assets if there are no incentive schemes in place to reduce investment.

In November 2012, the AEMC made rule changes to address the incentive issues facing electricity networks to deliver efficient investment. These rule changes allowed the AER greater discretion to apply incentive schemes aimed at limiting inefficient investment. The AER subsequently developed and applied a Capital Expenditure Sharing Scheme for all electricity networks.[238]

In recent years market bodies have sought to improve the dependability of forecasting exercises to reduce the risk of over-investment and changes have been made to test and

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232 AER, *State of the energy market 2013*, 20 December 2013, p. 72.

233 This is a measure of maximum demand divided by network capacity. Data sourced from AER, Annual Benchmarking database, 2016, viewed 19 September 2017, https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/annual-benchmarking-report-2016.

234 This is a measure of maximum demand divided by network capacity. Data sourced from AER, *Annual Benchmarking database*, 2016.

235 AER, 2017 State of the energy market, p. 110.

236 AER, *Determinations for Victorian distribution networks for 2016 – 2020*, media release, 26 May 2016.

237 AER, 2017 State of the Energy Market, p. 110.

238 AER, *Better Regulation explanatory statement – capital expenditure incentive guideline for electricity network service providers*, November 2013.

verify forecast demand submitted as a part of regular system review processes like AEMO's annual ESOO.[239] These measures should help avoid unnecessary investment in the future, however further work is needed to incentivise demand side mechanisms as alternatives to new investment for addressing peakier and more volatile demand. The COAG Energy Council is currently considering the Finkel Review recommendations that include greater system planning and measures to incentivise non-network solutions.

The ACCC considers that improved demand forecasting should reduce the amount of unnecessary network costs that customers pay. However, network operators will continue to recover the amounts previously invested in infrastructure that occurred as a result of inaccurate forecasts.

3.3.3. Economic regulatory regime

State and territory regulators originally administered the economic regulation of electricity network operators until the NER and NEL commenced in 2006. From this time, the AER became responsible for the economic regulation of all electricity network operators in the NEM. At this time, it was considered necessary to include prescriptive procedures and factors that the AER ought to observe in making regulatory decisions.

The AER has previously stated that the 2006 NER were deliberately set to create a favourable environment for investment but in doing so, the balance of cost and service was not given sufficient attention.[240] In its inquiry into the Electricity Regulatory Frameworks, the Productivity Commission found that flaws in the design of the framework contributed to network price increases between 2007 and 2012.[241] The Independent Review Panel report on network costs in Queensland similarly found that the framework "limits the ability of the AER to drive the [network operators] towards the delivery of efficient capital and operating programs."[242]

There were three key ways in which the prescriptive nature of the 2006 NER contributed to higher network costs:

- the way that the cost of capital was required to be calculated prioritised certainty of process and this led to higher allowances for the cost of debt than the costs that network operators actually faced
- there was a presumption that network operators' expenditure proposals must be accepted if they were found to be reasonable, which ultimately led to consumers paying more than necessary for a reliable electricity supply
- there were limited incentives for firms to operate more efficiently as all capital expenditure was rolled into the regulatory asset base and provided a return for the network operator for the life of the asset.

Governments have sought to improve economic efficiency around network investment in recent years. A revised framework for the AER to assess network revenues was introduced in 2013, which went some way to addressing these issues. New rules were introduced in 2012 to allow the AER to more robustly assess the costs proposed by electricity network businesses. The changes also provided for a greater focus on incentive regulation and

239 AEMO, *2017 Electricity Statement of Opportunities*.

240 Reeves, A, *Consumer involvement in energy regulation*, speech, 23 May 2013.

241 Productivity Commission, *Electricity Network Regulatory Framework, Productivity Commission Inquiry Report, Overview and recommendations,* 9 April 2013, p. 2.

242 Queensland Government, June 2014, p.v.

improved stakeholder consultation processes.[243] However, these rules continue to be prescriptive and detailed.

The benefits arising from these new rules, including new incentive schemes and a focus on economic benchmarking, have been seen in AER network determinations undertaken since 2014. However, the AER has acknowledged that further work is required, particularly in relation to engagement with both consumers and network operators.[244] There is ongoing work to develop or revise incentive schemes and guidelines. For example, the AER's final demand management incentive scheme and innovation allowance mechanism are expected to be finalised by December 2017; and a review of its rate of return guideline was initiated in July 2017.[245]

While the revised framework has gone some way to addressing these issues, outcomes in this period will impact on electricity prices for some time. For example, network costs will reflect over-investment between 2006 and 2013 for the life of the assets – which can be up to 50 years.

3.3.4. Limited merits review

The NEL provides for affected parties, including network operators and consumers, to seek review of any AER network determination. Reviews can be in the form of limited merits review by the Tribunal or judicial review by the Federal Court. The grounds for limited merits review are that the determination involved an error of fact, an incorrect exercise of discretion or an unreasonable decision having regard to all the circumstances. Broadly speaking, the Tribunal can either reject the application, substitute the AER's primary decision with its own determination, or remit the decision back to the AER with instructions for reaching a new decision.

Compared to the initial determinations made by the AER, the limited merits review process has led to a material increase in network revenues passed through to consumers since it was introduced in 2008. From that time, 22 of the AER's 35 electricity network decisions have been appealed (including 19 of 24 distribution network decisions). For AER decisions up to 2014, Tribunal appeals added around $3.2 billion to network revenues. Tribunal processes for current AER determinations (those since 2014) are ongoing or are being appealed through the Federal Court, or the outcomes are being considered by the AER through its remittal process. The network operators in NSW, the ACT, Victoria and South Australia sought review on elements of the AER decisions valued at over $6 billion. No decisions of the Tribunal have resulted in a decrease in revenues for the regulated business compared to the AER's original decision. In addition to these direct outcomes of reviews, revenues for other businesses in subsequent determination processes are also inflated where the AER has applied the Tribunal's approach to particular elements rather than its own preferred approach.

The limited merits review framework was amended in 2013 following a review that found it was not meeting the National Electricity Objective,[246] and reviewed again in 2016.[247]

The 2016 review found that changes to the framework in 2013 were largely considered to have failed. Submissions to the review raised concerns that the limited merits review

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243 AEMC, *National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, Rule Determination, November 2012.

244 Conboy, P, *Working together to restore confidence in energy regulation*, 2017 Energy Networks Australia Regulation Seminar speech, 26 July 2017.

245 AER, *Review of the rate of return guideline*, 31 July 2017, viewed on 15 September 2017, https://www.aer.gov.au/communication/aer-kicks-off-its-review-of-rate-of-return-guideline.

246 Yarrow, G, Egan, M and Tamblyn, Dr J, *Review of the limited merits review regime, stage two report*, September 2012.

247 COAG Energy Council, *Meeting communique*, 14 December 2016.

framework compromises the initial decision making process, with the businesses less likely to engage fully with the AER. They also raised concerns that the Tribunal was being asked to assess issues that involved significant economic uncertainty or required the application of expert discretion, including setting elements of a business's cost of capital. Some suggested that the Tribunal process is arguably not well suited to assessments of this type.

There are also examples of where the Tribunal has appeared to prioritise a network operator's interests over outcomes that support the long term interest of consumers. The most recent decisions for the NSW and ACT distribution businesses, for example, saw the Tribunal express the view that it was appropriate for network operators to recover costs associated with inefficient enterprise bargaining agreements. In this matter the Tribunal stated that "…it is the policy of the legislative arm of government that, to the extent that the [enterprise bargaining agreements] are (if they are) an inefficient imposition on the [distribution network service providers], nevertheless they are a cost to be borne by the consumers of electricity." The Tribunal then went on to assert that the AER should have regard to the obligations under the enterprise bargaining agreements as they presently exist (regardless of whether they are efficient or not) when setting the network operator's operating expenditure allowance. The AER has noted that labour costs account for approximately 80 per cent of a network operator's operating expenditure allowance so any inefficient enterprise bargaining arrangements have the potential to significantly add to network charges.

The COAG Energy Council in December 2016 agreed to further refinements to the limited merits review framework. But the Australian Government subsequently introduced legislation to remove limited merits review in respect of AER electricity network determinations. The limited merits review framework appears to have undermined the initial decision making process of the AER, and has led to significant price uncertainty for electricity customers. The ACCC supports the decision to remove limited merits review and considers that judicial review offers a sufficient avenue for network operators to appeal AER decisions.

3.3.5. Customer impact

While network costs rose for all customers, the impact was not felt evenly across the customer base. Network tariff structures can mean that some customers are paying more than their fair share of network costs.

The design of network tariffs, particularly for small customers, largely link charges to a customers' overall usage. But it is a customer's peak (rather than overall) usage that drives the majority of network costs. For example, the AEMC has noted that installing an air conditioner (which typically runs during peak periods) adds $1000 to annual network costs, but the household only pays $300 of this through higher bills.[248] The remaining cost is met through higher charges on other users. This effect has also been seen with the uptake of solar PV systems which reduce the overall consumption of a solar customer, but with a much smaller impact on their peak consumption.

Energy Networks Australia and the Commonwealth Scientific and Industrial Research Organisation (**CSIRO**) estimate that $16 billion in extra costs associated with meeting peak demand can be avoided by 2050 through pricing reform, incentives and modernising the electricity system.[249]

An AEMC rule change that took effect in 2016 requires networks to move towards cost reflective pricing, including a greater focus on the impact of peak demand. Electricity

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248 Henderson, N, *Power of choice and other energy market reforms*, Speech at the 2014 EUAA conference, 13 October 2014.

249 Energy Networks Australia and CSIRO, Electricity network transformation roadmap, final report, April 2017, p.12.

retailers have the key role of designing retail offers that incorporate these cost reflective network tariffs. In most NEM regions, progress towards this goal is still in the early stages, and network operators have raised concerns around whether the current policy settings and competitive market conditions are sufficient to 'achieve the transition to cost reflective tariffs with the urgency required'.[250]

Two key issues present barriers to more rapid progress towards cost reflective tariffs:

- the limited rollout of smart meters to residential and small business customers other than in Victoria (the introduction of competition in metering, to commence from December 2017, may accelerate the uptake of smart meters)
- government decisions to provide for transition to these tariffs on an opt-in basis in some regions. The AER, in its approval of new tariff structures in 2017, stated that "opt-in arrangements are not likely to encourage sufficient uptake to enable successful tariff reform", and noted the limited success of these arrangements to date.[251] The AER recommended that network operators move to an opt-out approach to transitioning customers in the next round of tariff structure statements.

There is also a question about whether retailers have sufficient incentives to pass through and promote cost reflective network pricing in retail offers. One option is to make cost reflective tariffs available to consumers on a trial basis so that they can gauge their appropriateness. Customers could then be given the opportunity to move back to their previous tariff without penalty if desired.[252]

The ACCC considers that moves towards cost reflective network tariffs will provide a means of providing better signalling to customers and retailers at times of high demand and high pricing. Cost reflective network tariffs are the first step towards customers being able to access cost reflective retail tariffs if these are appropriate for them.

3.4. Environmental schemes

Electricity generation is a key source of Australia's carbon dioxide emissions and has therefore been a focus of efforts aimed at meeting domestic and international reduction targets. Various mechanisms have been designed and implemented by state, territory and Commonwealth governments which are broadly aimed at this policy objective. A description of the key policies is included in chapter 2.

The ACCC recognises and supports the important role of governments in seeking to address environmental objectives. The ACCC's interest in this area during the Inquiry is to examine the impact of environmental schemes on affordability and, in particular, whether the design of these schemes has had sufficient regard to the affordability and distributional impacts that they have.

Some environmental schemes have been subsequently removed, such as the carbon price and various generous state-based feed-in tariff schemes for rooftop solar PV.[253] Other schemes, such as the RET and various more modest feed-in tariff schemes remain in operation and continue to be a cost for which end users of electricity pay.

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250 Energy Networks Australia, *Submission to ACCC Issues Paper*, 3 July 2017, p. 6.

251 AER, *Final Decision – Tariff structure statement 2017, Ausgrid, Endeavour and Essential Energy*, February 2017, p. 22.

252 Hobman, E, Frederiks, E, Stenner K and Meikle, S, *Uptake and usage of cost-reflective electricity pricing: Insights from psychology and behavioural economics*, May 2016, Renewable and Sustainable Energy Reviews, 57, p. 457.

253 In the case of state-based feed-in tariff schemes, while the schemes themselves have been discontinued a significant number of customers still have access to the scheme under legacy arrangements.

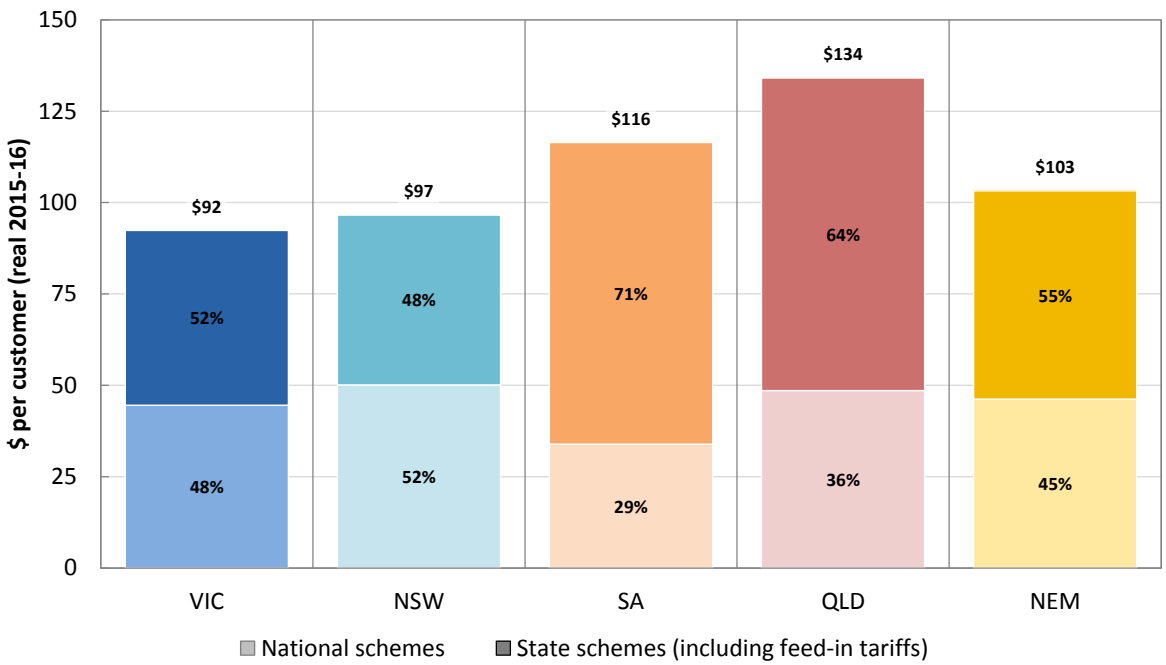
Chapter 2 details the direct cost impact of state and federal environmental schemes on end user electricity prices. Broadly, the cost of the various environmental schemes has increased from 1–2 per cent of total residential bills in 2007–08 to 7 per cent in 2015–16.

Figure 3.13 below reports the direct cost of environmental schemes on the average residential customer in each state. The chart breaks down the impact of national and state-based schemes.

Direct environmental costs include the cost retailers incur (and pass onto their customers) in acquiring renewable energy certificates under the SRES and LRET scheme (national), and the cost of state-based schemes such as mandatory feed-in tariffs for solar customers that must be recouped from the broad customer pool.

Indirect impacts of environmental schemes, including the effect of renewable energy on wholesale electricity prices, are discussed further below.

Figure 3.13: Contribution of environmental schemes to customer bills in 2015–16



Source: ACCC analysis based on retailers' data

This figure illustrates that the contribution of environmental costs to customer bills differs between states, and that the impact of state-based schemes varies considerably. The higher proportion of costs attributable to state-based schemes in South Australia and Queensland is likely due to local feed-in tariffs and the higher uptake of rooftop solar in those regions.

This analysis does not capture the indirect effect of these schemes on electricity affordability, such as inefficient cross-subsidisation between consumers, which is discussed below.

Schemes such as the carbon price and RET are designed to influence the generation mix to achieve environmental objectives and, in doing so, affect wholesale prices. These schemes encouraged significant deployment of large scale renewable energy, particularly from 2012 (initially mostly wind generation, but more recently solar). This increased penetration of low marginal cost renewable generation contributed to average wholesale prices remaining at historically low levels between 2012 and 2015.[254]

[254] See Figure 3.1 in chapter 3.

The AEMC noted in its 2016 Price Trends Report, however, that increased large scale renewable generation has driven greater wholesale price volatility due to the intermittent nature of the plant. The growth in renewable generation has also displaced some aged thermal generation with the effect of pushing wholesale prices higher as exit occurred.

The Finkel Review also undertook modelling to forecast prices under a CET and Emissions Intensity Scheme (**EIS**). This modelling found that the CET and EIS policy scenarios would result in lower residential and industrial electricity prices, compared to forecast prices under current policy settings. The Finkel Review attributed these lower costs to stability and reduction in risk for the electricity sector that a CET or EIS would bring.[255]

Small scale energy efficiency schemes and incentives to install distributed generation such as solar PV are focused on reducing the amount of electricity dispatched from the grid to small consumers. Reduced electricity demand should lead to downward wholesale price pressure for all consumers.

3.4.1. Impact of feed-in tariffs on retail bills

Australian consumers have been strong adopters of solar PV. Initially this uptake was driven by premium feed-in tariffs which paid households a high rate for electricity produced by their PV system.[256] Even though all of these schemes are fully subscribed and closed to new applicants, premium schemes remain in place in Victoria, South Australia, Queensland and the ACT. For example, the premium 60c per kWh scheme in Victoria will pay subscribers until 2024[257] and the 44 cents per kWh Class 1 scheme in South Australia will pay subscribers until 2028.[258]

While these schemes varied across regions, they typically included generous payments of double to triple the then retail rate for electricity. The cost of funding these schemes was spread across all customer bills (i.e. those with solar PV and those without) based on the amount of electricity consumed. The impact of the cost recovery method for the premium feed-in tariff schemes was felt most by small customers who did not participate in the scheme as they did not benefit from a reduction in the volume of electricity they purchased from the grid. This cost recovery method may have disproportionately impacted vulnerable customers, many of whom were unable financially or practically (for example, renters or those in apartment buildings) to access solar PV.

The impact of solar PV on residential electricity prices is also felt through the apportionment of network costs between solar and non-solar customers more generally. The widespread use of flat rate network tariffs means that customers with installed solar systems also avoid a large portion of the network costs through reduced consumption, and consequently they are also not likely sharing the full cost associated with meeting peak demand. In 2014, the AEMC found that a consumer could save around $200 per year in network costs by installing a solar system, but this would only reduce overall network costs by around $80.[259] As the network costs need to be recovered, other customers cross-subsidise the remaining $120 through higher network charges.

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255 Dr Alan Finkel AO, June 2017, p. 90.

256 In NSW and the ACT the feed-in-tariff in these initial schemes paid on a 'gross' basis, wherein all electricity generated by the solar PV installations (including units that are used on the premises rather than exported to the grid) received the tariff. Other schemes (including current feed in-tariffs offered by retailers) are paid on a 'net' basis, wherein only generation that is exported to the grid receives the feed-in tariff.

257 Victorian Department of Environment, Land, Water and Planning, *Closed feed-in tariff schemes*.

258 ESCOSA, *South Australia's Solar Feed-in Tariff Scheme*, p. 2.

259 AEMC, *National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014*, Draft Rule Determination, 28 August 2014, p. ii.

From July 2017, the Queensland Government removed premium feed-in tariff costs from network charges and will meet these costs ($770m) through the budget.[260] This will have a positive impact on the affordability of retail electricity services, with a typical customer saving $56 in 2017–18.

For those with solar PV but not subscribed to premium schemes, retail feed-in tariffs were introduced to provide a payment to customers for electricity exported to the grid. Retail feed-in tariff prices are set by the retailer in most regions, but a minimum feed-in tariff is regulated in Victoria and Tasmania. Usually these tariffs reflect the value of wholesale electricity only, resulting in a smaller reduction in customers' electricity bills and a cost to the retailer equivalent to them purchasing that electricity from the NEM.[261] However, Victoria recently moved to increase the price above the estimated wholesale rate to reflect the full value of exported solar power (including the avoided cost of carbon emissions).[262] The premium above the wholesale rate is a cost that will be recovered across all electricity users.

3.4.2. The impact of the RET and state renewable energy schemes on electricity prices

Submissions to the ACCC have stated that a failure to implement consistent, enduring environmental policy in the electricity sector has resulted in significant investment uncertainty. Policy changes have included the implementation and repeal of a carbon price within two years, three major changes to the target and scope of the RET over the past ten years and a proliferation of state level initiatives including, for instance, reverse auctions for large scale renewable energy projects in the ACT and Victoria.[263]

The Finkel Review found that this uncertainty is "undermining investor confidence, which in turn undermines the reliability of supply of electricity and increases costs to consumers."[264] The impact of this on the generation sector and wholesale prices is discussed in section 3.1 above.

Numerous studies have looked at the impact of the RET on the electricity prices, including modelling for the Climate Change Authority and the review chaired by Dick Warburton reviews of the RET in 2012 and 2014 respectively. These reviews have generally found that the RET will have a limited (either positive or negative) impact on electricity retail prices by 2030.[265] But there has been criticism of the methodology used in these studies, in particular by large market participants.

The shift to large scale renewable energy has also impacted the wholesale contract market. Intermittent wind and solar generators typically play a limited role in the contract market, meaning that liquidity has reduced over time.[266] The current price volatility and reduced liquidity in contract markets as a result of the change in energy mix is considered in detail by the Finkel Review.

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260 Queensland Treasurer and Minister for Trade and Investment and Queensland Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply, Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply, *Palaszczuk Government intervenes to continue electricity price stability,* Media Statement, Queensland, 31 May 2017.

261 Retail feed-in tariffs outside Victoria range between 6-12 cents per kWh.

262 Victorian Department of Environment, Land, Water and Planning, *Victorian feed-in tariff*, viewed 11 September 2017, https://www.energy.vic.gov.au/renewable-energy/victorian-feed-in-tariff.

263 Details on the auction process can be found at: https://www.energy.vic.gov.au/renewable-energy/victorian-renewable-energy-auction-scheme (for Victoria) and http://www.environment.act.gov.au/energy/cleaner-energy/how-do-the-acts-renewable-energy-reverse-auctions-work (for the ACT).

264 Dr Alan Finkel AO, June 2017, p. 5.

265 Climate Change Authority, *Renewable Energy Target review report*, December 2014; Warburton, D, Fisher, B, Veld, S I and Zema, M, *Renewable Energy Target Scheme, report of the Expert Panel*, August 2014.

266 Dr Alan Finkel AO, June 2017, pp. 80-81.

The COAG Energy Council is in the process of implementing a range of recommendations that are aimed at stabilising the wholesale market and improve system planning. Greater system planning, obligations to improve system security and improved ancillary markets along with technology solutions like storage should help mitigate the effects currently associated with increased penetration of variable renewable energy resources. In September 2017, AEMO provided advice to the Minister for the Environment and Energy on the risks to reliability and affordability posed by the recent exit of thermal generation and anticipated exit events over the next ten years. AEMO indicated it is looking to acquire 'strategic reserves' to ensure sufficient operating capacity over summer 2017–18.[267]

[267] AEMO, *Advice to Commonwealth Government on dispatchable capability*, September 2017, viewed 19 September 2017, https://www.aemo.com.au/Media-Centre/AEMO-advice-to-the-Commonwealth-government.

4. The consumer experience

Key points

- The retail electricity market is complex. Most consumers have multiple offers to choose from but it is often difficult to compare these offers – discounting is common but this discount is not applied off a consistent rate and many retailers use inconsistent terminology.
- There is a significant degree of price dispersion, with hundreds of dollars difference between the highest and lowest retail offers in most NEM regions.
- While there are many signs of competition, such as a number of electricity retailers operating in most NEM regions and relatively high rates of switching, other indicators, such as low levels of innovation and increased retail costs and margins, suggest competition is not driving good outcomes for consumers.
- While surveys suggest many consumers are satisfied with their retailer, many consumers are unaware of the options available to them to compare retail electricity offers or seek assistance if they are struggling to manage their bills.
- The retail electricity market is highly regulated, and the ACCC has identified examples of retailers operating in ways that appear to be designed to circumvent existing regulation. The ACCC has also identified examples of unintended consequences of regulation.

A key focus of the Inquiry is to consider any conduct of industry that prevents effective consumer participation in the retail electricity market, or results in higher retail prices.

This chapter outlines what the ACCC considers to be positive consumer outcomes and the obstacles to these being achieved. Many submissions to the Inquiry raised concerns about unnecessarily complex and confusing behaviour by electricity retailers. Some of this behaviour, while confusing, is not likely to breach the regulatory regimes that operate across the NEM. At times, this behaviour may be an unintended outcome of existing regulation. The ACCC has also identified certain behaviours by electricity retailers that appear designed to circumvent requirements in the NERL and Victorian Energy Retail Code (**Energy Retail Code**).

This chapter focuses on the experience of consumers. While some of these issues outlined below apply equally to businesses that meet the definition of 'small customer' in the NERL, substantive discussion of the impact on businesses is set out in chapter 1.

4.1. Signs of competition

A competitive market should lead to positive consumer outcomes—in the form of access to a diverse range of high quality products and services at competitive prices.

The retail electricity market has some characteristics normally associated with a competitive market—there are numerous retailers operating in most NEM regions, each with a range of offers. There are relatively high rates of switching[268] and a significant degree of price dispersion.[269] However, it does not display other positive characteristics generally associated

[268] The AEMC has reported that 19 per cent of small customers changed retailer or plan in 2016 (AEMC, 2017 Retail Energy Competition Review, p. 69).

[269] The AEMC has found the difference between the median standing offer to the best market offer in January 2017 for a representative consumer was between $170 and $507 per year (AEMC, 2017 Retail Energy Competition Review, p. V). The AER found that the difference between the worst and best offer exceeded $1000 in most distribution network areas (AER, 2017 State of the energy market, p.148).

with a well-functioning competitive market, including low levels of concentration, low margins and prices, and a range of innovative tariff types and service options.

Electricity is also an essential service. While some consumers may be able to reduce the amount of electricity that they consume, a base level of consumption is "essential to health, wellbeing, economic participation and social inclusion."[270]

4.2. Types of offers available to consumers

Before the introduction of competitive retail electricity markets, small consumers had no choice of offer—all consumers were on the same tariff structure and price. But the introduction of retail competition, combined with an increased uptake of smart meters and moves towards more cost reflective network tariffs, means that most residential and small business customers can now choose from dozens of retail offers.

There are two broad types of offers available to consumers:

- **standing offers**: a safety net or default offer with a minimum set of terms and conditions, which is designed to ensure that all consumers have the ability to access electricity services. Standing offer prices are regulated in regional Queensland, Tasmania and the ACT, but are set by retailers in other regions.
- **market offers**: offers that can have different terms and conditions from the retailer's standing offer, including discounts and other features on which retailers can compete.

Standing offers are typically the most expensive offers in the market. Table 4.1 below shows the proportion of consumers on standing offers and market offers in each state and territory in the NEM.

Table 4.1: Proportion of consumers on standing and market offers

State/territory	Standing offer	Market offer
NSW	26%	74%
Queensland (total)	51%	49%
South East Queensland	26%	74%
Victoria	9%	91%
South Australia	15%	85%
Tasmania	88%	12%
ACT	76%	24%

Source: AER Annual report on the performance of the retail energy market 2015–16, November 2016 and ESC Victoria, Victorian Energy Market Report 2015–16, November 2016.

According to the AEMC there are currently over 1600 offers generally available for small customers throughout the NEM and the number of offers available continues to increase.[271]

In addition to these public offers, retailers have other offers that are not generally available and so are not publicised or reported on. For example, when a consumer switches to

[270] CALC, *Power Transformed,* July 2016, p. 4.

[271] AEMC, 2017 Retail Energy Competition Review, p. 106.

another retailer, they may be offered a special 'win-back offer' to encourage them to stay (described in further detail in section 3.2.4 above).

Around half of all offers are flat rate tariffs, i.e. a consumer is charged the same amount for electricity regardless of when it is used. The remainder are mostly time of use tariffs. Time of use tariffs have charges that vary throughout the day or week to reflect the varying cost of supplying electricity at different times.

Flat rate and time of use tariffs are made up of a fixed component (supply charge) and a variable component (usage charge). This generally reflects the nature of the costs faced by retailers in supplying their customers, not all of which change as a result of a consumer's actual electricity consumption. Analysis undertaken as part of the Victorian Review suggests that retailers are increasingly recovering retail costs through fixed charges.[272]

As detailed in section 3.2.3 above, while the number of offers has increased significantly over recent years, there has been little in the way of innovation in underlying price structure across these products. One reason for this could be the underlying network tariff structures (described in section 3.3.5 above). As noted above, there are processes underway to move consumers to more cost reflective tariff structures, however network operators have raised concerns around whether the current policy settings are adequate.[273]

4.2.1. What are consumers actually paying?

While most consumers are on market contracts, there is limited reliable data around what these consumers are actually paying. CME were engaged by the Victorian Government to examine 686 household electricity bills over the timeframe of December 2016 to April 2017. The report, while limited to an analysis of the Victorian market, indicated a broad variety of prices even amongst the same consumer type.[274] The report also indicated a vast spectrum between the most expensive and cheapest bills, but that the median price across the 'popular' retailers did not vary greatly.[275]

Submissions from consumer organisations raised specific concerns about the number of vulnerable consumers that are on higher priced offers and the impact this was having on these households.[276] Research and anecdotal evidence undertaken in Australia and the United Kingdom indicates that there are consumers from a wide range of socio-economic groups on higher priced offers due to a lack of interest, capacity and/or confidence in electricity market offers.[277] However certain vulnerable consumer segments may be less likely to engage with the market and take advantage of market offers.[278]

In a submission to the Victorian Review, Dr Ron Ben-David estimated that in 2015–16 only 30 per cent of Victorian consumers benefitted from competitive discounted prices, with the remainder on higher market or standing offers.[279] However, research by retailers estimates

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272 CME, July 2017, p. 28.

273 Energy Networks Australia, 30 June 2017, pp. 16-17 and Victorian Electricity Distribution Networks, *Submission to ACCC Issues Paper*, July 2017, pp. 8-10.

274 CME, July 2017, p. 2.

275 Ibid.

276 See for example, Victorian Council of Social Service, *Submission to ACCC Issues Paper*, July 2017, p. 12.

277 Frederiks, E, Stenner, K and Hobman, E, *Household energy use: Applying behavioural economics to understand consumer decision-making and behaviour*, Renewable and Sustainable Energy Reviews, Volume 41, 2015, p. 1388.

278 See for example, TNS BMRB, *Consumer engagement in the energy market since the Retail Market Review 2016 Survey Findings: Report prepared for Ofgem.* Ofgem. August 2016, p. 24 and Newgate Research, *Understanding vulnerable customer experiences and needs,* June 2016, p. 6.

279 Ben-David, Dr R, *Submission to Review of Electricity and Gas Retail Markets in Victoria*, 28 February 2017.

that around 56 per cent of consumers are on heavily discounted market offers.[280] The Victorian Review concluded that most consumers would pay less by switching to the lowest market offer, particularly those supplied by the Tier 1 retailers.[281]

The ACCC is in the process of collecting data on what consumers across the NEM are actually paying and will present this data in its final report in June 2018.

4.2.2. Price dispersion

Submissions to this Inquiry have highlighted the common industry practice of discounting off the standing offer or a base market offer rate. The AEMC made a similar finding in its 2017 Retail Energy Competition Review.[282] The increasing use of discounting has resulted in high levels of price dispersion, or price discrimination, i.e. electricity retailers are selling the same product to different groups of consumers at different prices. Price dispersion has increased over time and the greatest dispersion appears in more mature retail markets like Victoria. The ACCC has identified broader issues with the practice of discounting which are discussed in further detail in section 4.3.2 below.

The AEMC found that in NEM regions where consumers have a choice of retailer, the difference between the median standing offer and the best market offer in January 2017 for a representative consumer was between $170 and $507 per year. The largest price spread was in Victoria, followed by South Australia, NSW, Queensland and the ACT.[283] In addition, a survey of bills for the Victorian Review found some consumers could save in excess of $1000, with over 40 per cent of the consumers surveyed able to save an average of $223 and a further quarter able to save an average of $501 per year by switching to the best generally available offer in the market.[284] In its July 2017 update for the Tariff Tracker project, St Vincent de Paul also found a significant difference between the best and worst electricity market offers in South Australia and NSW.[285]

A 2016 paper by Paul Simshauser and Patrick Whish-Wilson looked at the issue of price dispersion in Victoria, the most mature deregulated retail electricity market in Australia, and south east Queensland, which at that time still had price regulation. They found that price dispersion was greater in Victoria, and that price outcomes were reflective of an 'effectively competitive' market. Standing offer rates in Victoria were higher than Queensland (and above the average total cost of supply). However, some Victorian market offers were set at marginal cost with no mark-up, while Queensland market offers included a 6.7 per cent mark up.[286]

The AEMC comments that "higher levels of price dispersion are often associated with markets with more effective competition" as retailers differentiate plans to better meet consumer preferences in such markets.[287] Simshauser and Whish-Wilson make a similar

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280 Nelson, T, McCracken-Hewson, E, Whish-Wilson, P and Bashir, S, *Price Dispersion in Australia's Electricity Markets - Working Paper*, ResearchGate, June 2017, p. 7.

281 Thwaites, Faulkner and Mulder, August 2017, p. 22.

282 AEMC, 2017 Retail Energy Competition Review, p. v.

283 Ibid, p. 29.

284 Thwaites, Faulkner and Mulder, August 2017, p. 20.

285 For South Australia, the difference between the best and worst electricity market offer is $1070 per year, based on average consumption of 6000kWh per year (single rate), including all conditional and unconditional discounts (St Vincent de Paul Society, *Update report on the South Australian Tariff Tracking Project*, August 2017, p5.)

For NSW, the difference between the best and worst electricity market offer is $1230 per year (Essential Energy distribution area) and $840 (Ausgrid distribution area), based on average consumption of 7,200kWh per year (single rate), including all conditional and unconditional discounts (St Vincent de Paul Society, *Update report on the New South Wales Tariff Tracking Project*, August 2017, p. 6.)

286 Simshauser and Whish-Wilson, 2017, pp. 92-103.

287 AEMC, 2017 Retail Energy Competition Review, p. 28.

point, arguing that price dispersion increasing in a market as competition intensifies is typical for industries like energy, and is a practice that is frequently welfare enhancing.[288] However, Simshauser and Whish-Wilson also found that a large group of consumers classified as vulnerable were found to be on a higher priced standing offer and electricity offers are not well-aligned with a consumer's ability to pay.[289]

The idea that price dispersion is welfare enhancing rests on the assumption that consumers are segmented according to their elasticity of demand (willingness or ability to pay) and that it reflects a meaningful level of product differentiation (providing additional services or benefit to the consumer for any additional cost). In contrast to Simshauser and Whish-Wilson's view, the ICRC considers that price dispersion in the electricity market may only be reflecting information asymmetry and search costs.[290] Many submissions to the ACCC's Inquiry support this position.

The electricity market has features that may reduce incentives for consumers to incur search costs, even where it is economically rational to do so. Electricity is a complex and intangible good, and energy decisions are often tied up with wider preferences like where and how the consumer lives. One can also acquire electricity services relatively easily, with little effort and no time invested in comparing options. There is also often a lag between the time that electricity is consumed and when it is paid for. Some consumers may also respond rationally to higher prices, but in ways other than seeking out a cheaper offer. For example, some consumers may attempt to reduce their electricity bill by installing solar panels or reducing consumption, but many do not have access to these options.

Despite finding that electricity offers were not well aligned with consumers' ability to pay, Simshauser and Whish-Wilson caution against controls on pricing regulation that may constrain competitive outcomes given experiences in other jurisdictions. For example, after the United Kingdom's Office of Gas and Electricity Markets (**Ofgem**) introduced new rules that prevented retailers from varying discounts across supply areas, there was a period of reduced competitive pressure and a reduction in low priced electricity offers. Simshauser and Whish-Wilson recommend that efforts be directed at improving the misallocation of vulnerable consumers to high priced offers. Simshauser and Whish-Wilson also noted that there is a role for retailers to identify and support adversely affected vulnerable consumers.[291]

4.3. Obstacles to good consumer outcomes

Submissions to the Inquiry and comments made at public forums raised a number of issues with the way that electricity retailers engage with consumers, leading to poor consumer outcomes, in particular:

- the way that retailers provide information to consumers, market and design offers is clearly confusing and may mislead consumers
- there are barriers to consumers accessing information about their electricity usage and using this information to compare and choose an offer.

Some consumers may be able to better engage with the retail electricity market if they are provided clearer and simpler information about electricity offers and on bills, and have access to (and understanding of) tools to help them make decisions about their electricity retailer.

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288 Simshauser and Whish-Wilson, 2017, pp. 92-103.

289 Ibid.

290 ICRC, *Standing offer prices for the supply of electricity to small customers 1 July 2014 to 30 June 2017, Draft report*, February 2014, p. 119.

291 Simshauser and Whish-Wilson, 2017, pp. 92-103.

Vulnerable consumers may need greater assistance engaging with the retail electricity market and choosing an appropriate retail electricity plan. The difficulties faced by vulnerable consumers are diverse, and may require a range of responses.

4.3.1. Consumer understanding and confidence

Effective competition requires consumers to have the confidence, interest, and knowledge or tools to participate in the market. Consumers also need to be able to easily identify the value in the offers presented to them. A number of submissions highlighted concerns that the electricity market is hard to understand and difficult for consumers to navigate. As CitySmart's submission argued, "the electricity market has yet to develop into an accessible, understandable and easy-to-transact marketplace."[292]

Research conducted both in Australia and overseas has found that around 15–20 per cent of consumers are highly engaged, with the remainder generally disengaged unless prompted into action.[293] Some consumers choose not to engage, even when they know that engaging with the market could lead to average savings of $367 per year (23 per cent of an annual bill).[294]

This outcome may to some extent reflect consumer preferences or an active decision to remain with one retailer due to consumer satisfaction. However, consumers' motivations for not engaging could include a view that they consider those savings not worth their time, perceived difficulties with engaging with the market, and a lack of faith in realising promised savings.[295] Research by Energy Consumers Australia has found that this lack of faith, or sense of a low value for money, is apparent through the significantly lower rate of positive responses from consumers when comparing electricity to other services like banking, telecommunications and insurance.[296]

While research indicates that 69 per cent of households are satisfied with their retailer, households continue to lack confidence that the market is working in their interest. Consumers remain confident in their abilities to make choices about energy products and services, but are less confident that there is enough easily understood information and tools for them to manage their energy use and costs.[297]

Australian electricity consumers are not homogeneous and consumers' energy choices are driven by a range of factors. A consumer's interest (or lack thereof) in making a choice about electricity supply reflects their desire (or ability) to make complex financial decisions, levels of online literacy, income level, previous experience with the market and their consequent level of trust in the market, comfort and health needs, basic habits and routines and their level of control over electricity decisions.[298] For instance, the choices and needs of a retired pensioner that owns their home will likely be different to those of a mid-income working parent with young children that rents.

Behavioural research indicates that consumers also have a bias toward the status quo, a fear of losing out, and a disinterest in markets where the product is not easy to understand

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292 CitySmart, 21 June 2017, p. 1.

293 AEMC, 2017 Retail Energy Competition Review, p. 78; TNS BMRB, 2016, p. 4.

294 Newgate Research, *Consumer research for the Australian Energy Market Commission's 2017 Retail Energy Competition Review*, April 2017, p. 46.

295 Ibid, p. 45.

296 Energy Consumers Australia, *Energy Consumer Sentiment Survey: key findings for households*, June 2017, p. 2.

297 Ibid, pp. 2-3.

298 TNS BMRB, p. 15, Oxera, *Behavioural insights into Australian retail energy markets*, 11 March 2016 p. 18; Newgate Research *Understanding vulnerable customer experiences and needs*, June 2016, pp. 32, 35; Accenture, *The New Energy Customer: unleashing business value,* 2015, p. 15; Strengers, Dr Y, *Conceptualising everyday practices: composition, reproduction and change*, August 2010 pp. 5-6, and Frederiks, Stenner and Hobman, 2015, p. 1386.

or an everyday purchasing choice.[299] This is supported by research undertaken by the Centre for Competition Policy at the University of East Anglia, following a collective switching exercise in the United Kingdom.[300] As part of this exercise, consumers provided consumption information, which was passed onto retailers that bid in an auction to supply all consumers. Each consumer was then provided with a personalised offer from the winning company. This study found that the offer of a substantial saving alone was not sufficient to ensure switching and only around 50 per cent of consumers that would receive savings of £300 per year switched. The research also found that, all things being equal, being shown two offers (the offer from the winning company and a cheaper offer), rather than one, reduced the probability of switching.[301]

Retailers may use consumer biases to their benefit in the way that they market and design offers. For example, one retailer's internal documents notes that it must accept that it must 'fire the customer' if they belong to an undesirable segment. I.e. deliberately set some pricing points above a satisfactory level for some groupings of customers. This, combined with confusing and complex information and a low level of control, creates barriers to consumer engagement. These barriers are not specific to one group of consumers but can be heightened where consumers face other difficulties like literacy barriers or financial difficulties. Issues related to vulnerable consumers are discussed below in section 4.5.

Improvements to information requirements around pricing in recent years have contributed to positive changes in consumers' perceptions of their ability to engage with the market. However, Morgan Stanley research indicates that 66 per cent of consumers still see reducing electricity use as the best way to reduce bills, followed by changing offer or tariff arrangements and installing solar panels.[302] This tends to suggest that there is more that industry, governments and consumer organisations can and should do to make engaging with the market attractive and the experience more consumer-focused.

4.3.2. Retailer marketing practices and strategies

An effective retail market is founded on engaged consumers that have the ability to consider available options and shop around, thereby driving competition between retailers. Concerns have been raised in submissions to the ACCC's Inquiry and other reviews that retailers' strategies take advantage of inactive consumers and those who find it too hard to engage in the market, imposing what is effectively a 'loyalty tax' on consumers that do not switch offers or retailers.[303]

As noted above, when a consumer attempts to consider which offer and retailer is best for them, they are faced with numerous options that are difficult to compare. Electricity retailers market to consumers using similar strategies, but using different terminology to explain the same concepts. While there are government and commercially run tools to assist consumers in making decisions about electricity offers, there is low awareness and understanding of them.

A consistent theme in submissions and comments made at public forums is that consumers would benefit from a greater availability of simple information.

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299 Frederiks, Stenner and Hobman, 2015, pp. 1385-1394.

300 Deller, D, Giulietti, M, Loomes, G, Waddams Price, C, Bermejo, A M, Jeon, A Y, *Switching Energy Suppliers: It's Not All About the Money*, CCP Working Paper 17–5, Centre for Competition Policy, University of East Anglia, 2017.

301 Ibid, pp. 1-2.

302 Koh, R, Martin, A and Li, A C, *Australian Billing Utilities: shocked by the power bill*, Morgan Stanley Research, 13 July 2017, p. 4.

303 See for example, CALC, 3 July 2017, pp. 2–3; Powershop, *Submission to Review of Electricity and Gas Retail Markets in Victoria*, 20 February 2017, p. 2.

Many submissions and statements at the ACCC's public forums also highlighted the lack of comparability across market offers and the difficulty many consumers have with making sense of different offer features and commonly used terms. The marketing behaviour and pricing strategies of some retailers can make it difficult for consumers to compare even 'like-for-like' offers. Two particular concerns raised through submissions are the widespread use of discounting as the primary means of advertising energy offers, and the inclusion of 'fixed benefit' periods in contracts that mean that advertised discounts expire after the fixed benefits concludes and the contract continues, often indefinitely.

Even without the difficulties associated with how offers are communicated, complex underlying price structures and the sheer number of offers available mean that many consumers find it difficult to identify offers that best meet their needs.

Other issues raised in the consultation process included concerns around a range of retailer acquisition and retention strategies.

Box 4.1: Consumer protections

Electricity retailers must comply with obligations under the Australian Consumer Law (**ACL**), the NERL, the National Energy Retail Rules (**NERR**) (which operate under the NERL), and, in Victoria, the Energy Retail Code.

The ACL aims to protect consumers and ensure fair trading in Australia. The ACL is contained in Schedule 2 to the CCA and is applied as a law of each state and territory by state or territory legislation. The ACL contains provisions prohibiting misleading and deceptive conduct and false representations, unfair contract terms, unsolicited consumer agreements, and unconscionable conduct. The ACCC has successfully taken court action against electricity retailers for breaches of the ACL. Detail on these matters is set out in appendix 4.

The NERL and NERR build on the ACL with additional energy specific consumer protections, including obligations on energy retailers to comply with specific information and contracting requirements. The NERL also sets out the framework for market entry – providing for the authorisation of retailers and the exempt selling framework for supply of electricity in Queensland, NSW, the ACT, South Australia and Tasmania.

Victoria applies its own legislation and Energy Retail Code in place of the NERL and NERR, although the frameworks share many features.[304] The Victorian Review's final report includes recommendations that would see changes to the operation of the Victorian legislation and code. In making recommendations to amend energy legislation, the ACCC will consider both the NERL and Victorian legislation.

Along with identifying areas for regulatory reform and policy consideration, the ACCC will also consider whether conduct is likely to breach existing consumer protection regulation. If the ACCC identifies possible breaches during this Inquiry, it may take action or refer these to the AER for investigation where appropriate.

Discounting

Headline discounts are a key marketing tool for most energy retailers. Around 80 per cent of all generally available offers include some form of discount.[305] Some retailer submissions argued that discounts are used because consumers like them.[306] However, discounts are not offered to all consumers in all circumstances. One retailer's internal documents indicate

[304] *Electricity Industry Act 2000,* (Victoria); Energy Retail Code version 11 (Victoria).

[305] AEMC, 2017 Retail Energy Competition Review, Appendix B.

[306] AGL, 18 July 2017, pp. 21-22; Origin Energy, 30 June 2017, p. 21; Sumo Power, 30 June 2017, p. 10.

disappointment that its staff were offering discounts to assist or offset price increases. The document stated that "[o]ne of the key points from the rate change workshops held with the team leaders was to steer the conversation away from discount [sic], discuss that the rates are competitive and to talk about energy saving tips etc." Internal documents from another retailer indicates that it has an objective to "[m]anage discount budget through targeted application". A "primary target group" for this same retailer is customers that are "both high value and high price sensitive [sic]" and its strategy is to vary discounts based on this.

Research undertaken for the Victorian Review found that 84 per cent of consumers surveyed said that discount offered was 'very important' in their decision to switch retailers. Similarly, behavioural research for the AEMC indicated that for consumers who had recently switched electricity retailer, the discount offered was one of the most important factors that may have influenced their decision (along with the price per kWh and the estimated total bill amount).[307] However, many other submissions argued that the way retailers advertise discounts is confusing or even misleading, and makes it more difficult to assess available offers.[308]

Are discounts a meaningful way for consumers to compare offers?

Discounts are a common way for retailers in many sectors to advertise or signal to consumers that the price being offered is lower than that which is generally available. The retail electricity sector is no different and, while discounts are attractive to consumers, the practice has been identified as a barrier to consumers engaging with the market successfully. A number of parties also consider that the practice of discounting has eroded trust in the retail electricity market.

The ACCC has previously taken action against electricity retailers for misleading discounts. In separate Federal Court proceedings finalised in 2015, Origin and AGL were required to pay penalties for making false or misleading representations concerning the level of discount that residential consumers in South Australia would receive.[309] The ACCC's review of internal documents produced by retailers as part of the Inquiry indicates that a number of retailers have enticed consumers with competitive deals, only to move them to a higher priced offer after the original benefit period expires.

Even if a 'discount' does not meet the threshold to be considered misleading or deceptive under the ACL, it could still be very confusing for consumers. This is particularly the case when there is no consistent form of presentation or application of discounts. For example, discounts advertised by major retailers vary in a number of important ways, some are:

- applied to the whole bill, while others only apply to usage charges
- based on the retailers' standing offer tariffs, while others are based on the retailers' 'basic' market offers
- guaranteed, while others are conditional on the consumer paying on time or by direct debit (see discussion in following section)
- apply for the term of the contract, while others are time limited and finish before the contract itself expires.

AMES Australia's submission states that there is a lack of transparency and clarity around product differentiation such as savings and discounts. AMES Australia considers that time

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307 Newgate Research, *AEMC: Consumer Research for 2016 Nationwide Review of Competition in Retail Energy Markets*, June 2016, p. 33.

308 See for example, AMES Australia, *Submission to ACCC Issues Paper*, 31 May 2017, p. 1.

309 These matters were taken under ss. 18 and 29 of the ACL. Section 18 prohibits misleading or deceptive conduct or conduct that is likely to mislead or deceive. Section 29 prohibits false or misleading representations. See appendix 4 for further detail.

limiting discounts or the limiting of discounts to usage charges, where the conditions are only in fine print would not be easy for people from culturally and linguistically diverse backgrounds to interpret correctly.[310] The Energy and Water Ombudsman Victoria also found through its community outreach program that consumers are confused by contract structures, and terms and conditions that allow for prices to change during a contract period.[311]

A key concern with the use of discounts is that it is not always clear to consumers what the 'discount' applies to, i.e. the underlying price, which makes it difficult to compare between different offers and between different retailers. Table 4.2 below illustrates this issue.

Table 4.2: example bills for a consumer with 5000 kWh of usage each year

	Offer A	Offer B	Offer C
Tariff (c/kWh)	20	25	30
Daily charge (c)	60	55	50
Discount	15% off usage	20% off entire bill	30% off usage
Total bill	$1069.00	$1160.60	$1232.50

Source: ACCC analysis, based on hypothetical offers.

While Offer C in Table 4.2 above has the greatest headline discount, the consumer will be best off on Offer A which has a smaller discount which applies to a lower underlying tariff. Yet when comparing offers the consumer may be intuitively more attracted to the offer associated with the greater discount.

If not supported by further information on actual prices, or a common basis of measurement, discounts are effectively meaningless as a means of comparison of offers across retailers. The Grattan Institute found that for a sample of offers from seven retailers, energy costs for a typical household were similar despite discounts offered ranging from zero to 33 per cent.[312] Likewise, in its 2017 Retail Energy Competition Review, the AEMC found examples where a representative consumer on an offer with a large discount would be paying more than if they were on an offer with a more modest discount because of differences in the underlying rates.[313]

The size of a discount does not always indicate that an offer is a 'good deal' for a consumer and this will generally depend on what underlying offer that the discount is taken from. In its internal documents, one retailer notes that "70%+ of customers are on sufficiently low discounts that the floor discount is a significant increase". In one state, the retailer's floor discount is 9% lower than the ceiling discount available.

Figure 4.1 below shows the annual cost for a typical consumer in the Victorian Powercor distribution network area under the cheapest market offer at January 2017 for each retailer (based on guaranteed and conditional discounts), and the headline discount attached to that offer. The advertised discounts of these offers provide little information to the consumer as to which offer is the cheapest. The cheapest offer included a 34 per cent discount off the total bill. The annual cost under the offer with the highest discount (40 per cent off usage) was $125 more than the cheapest offer. The cheapest offer is with a 34 per cent discount off the total bill). The second most expensive offer included a 35 per cent discount off usage only

310 AMES Australia, 31 May 2017, p. 1.

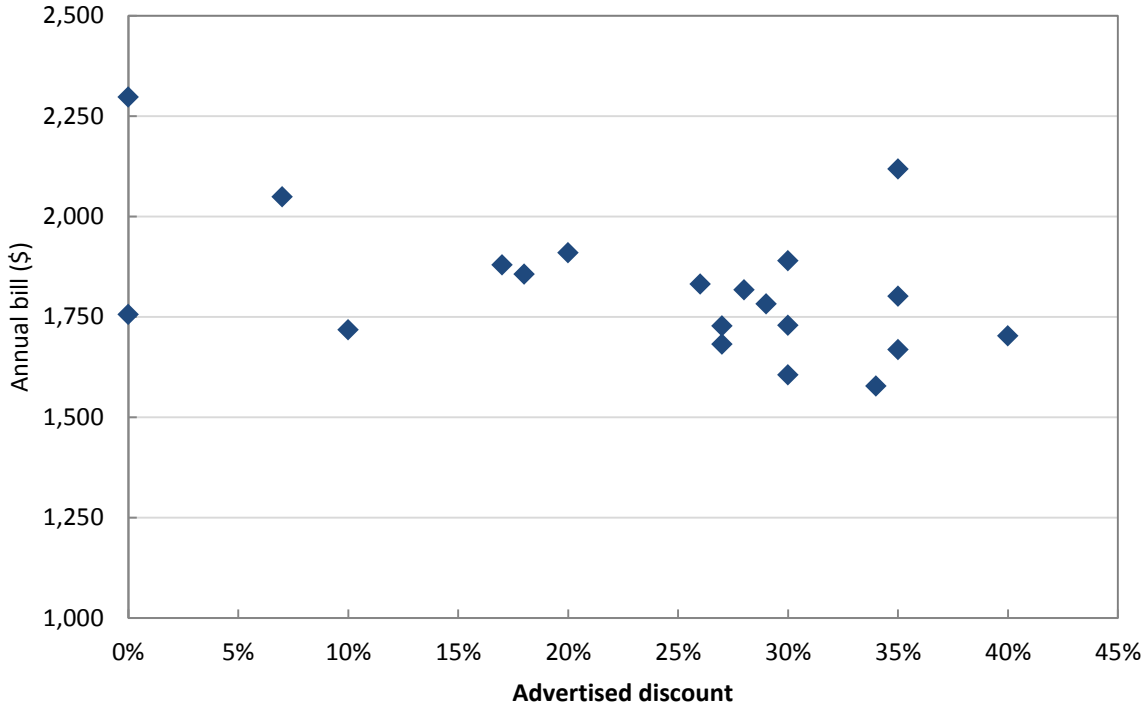
311 Energy and Water Ombudsman Victoria, *Submission to ACCC Issues Paper*, July 2017, p. 3.

312 Grattan Institute, March 2017, p. 27.

313 AEMC, 2017 Retail Energy Competition Review, p. 121.

and the lowest offer with no discount ($1,755) was $37 per year lower than the median offer ($1,792). Similar results are seen throughout the NEM to varying degrees.

Figure 4.1: Offer discounts and annual cost, Powercor distribution network (Victoria)



Source: Based on St Vincent de Paul Society Electricity Market offer data, January 2017

The ACCC is considering the extent to which competition to offer higher headline discounts is driving (or at least playing a significant part in) price dispersion, by leading to retailers using higher reference prices (which are less subject to competitive constraint) which the discount is then applied to. This practice, as shown in Figure 4.1, does not necessarily lead to lower overall prices.

Trend towards conditional discounts

Over 90 per cent of discounts offered by electricity retailers are now conditional on the consumer meeting certain requirements.[314] Most common are conditions that consumers pay the full bill amount on time, pay by direct debit, or receive electronic bills. The use of pay on time discounts has increased over time, as have the size of the discounts tied to on time payments. In 2010, less than 60 per cent of retailers in Victoria offered deals with pay on time discounts and the highest discount was 12 per cent. By September 2013 over 80 per cent offered deals with pay on time discounts and the highest discount was 22 per cent.[315] In January 2017, 90 per cent of retailers offer deals with pay on time discounts, and the highest discount was 40 per cent.[316]

Conditions attached to discounts can provide positive incentives for consumers to behave in a way that can both benefit the consumer (through a lower bill) and reduce a retailer's costs (including those associated with late payment, following up non-payment and sending paper bills). But the size of many of the discounts offered do not appear to reflect the actual cost savings available to the business. Particular concerns were raised at public forums in

[314] AEMC, 2017 Retail Energy Competition Review, Appendix B.

[315] St Vincent de Paul, *The National Energy Market – Is there a devil in the retail?*, December 2013, p. 22.

[316] St Vincent de Paul, *Victorian Energy Prices*, January 2017, p. 27.

relation to discounts tied to electronic bills, and that consumers should not be penalised for choosing to receive bills and other information by post.

The trend to tie discounts to on time payment also raises issues around the nature of electricity as an essential service. Late payment fees have been banned in Victoria since 2005 and are capped in other jurisdictions.[317] But pay on time discounts, which have the same or greater impact as a late payment fee for those unable to pay on time, are not subject to any controls. The ACCC considers it likely that the trend towards pay on time discounts was initially a response by electricity retailers to regulation banning or capping late payment fees. However, the size of pay on time discounts is significant, and can often amount to hundreds of dollars each year. This practice appears to be an unintended consequence of regulation.

Should consumers fail to meet the requirement for on time payment, the effect of the conditional discount and in some cases the added late payment fees result in consumers incurring a bill either equal or above the standing offer. For those consumers with a limited capacity to pay, this presents a clear barrier to benefitting from the competitive options in the market. The heavy focus on promoting conditional discounts may also make it difficult for consumers to compare offers on the basis that conditions will not always be met. The ACCC considers that vulnerable consumers, those on hardship programs and concession card holders should have the option of a tariff that is not tied to such large conditional discounts. The ACCC is considering whether retailers should be required to offer a lower priced tariff with no conditional discounts to such consumers, or whether vulnerable consumers should be placed on such an offer but with the ability to opt out if they consider that an offer with a conditional discount is best for them.

Many submissions have suggested that some form of control on pay on time discounts is necessary.[318] The ACCC is concerned about the widespread practice of large conditional discounts (usually pay on time discounts), and potential distributional effects this has on consumers that are unable to pay on time. These offers tend to have the effect that some consumers who have the capacity to pay their bill on time will benefit, while others who do not always pay their bill on time will face large penalties. The ACCC is open to the idea of some form of regulatory limitation on pay on time discounts, for example a cap. However, the potential ramifications of any regulatory limitation must be considered closely to limit the risk of any unintended consequences. Further, it is important to have regard to the likelihood that any limitation on pay on time discounts may adversely impact some consumers who currently benefit from these offers.

Fixed benefit periods and end of contract

Many electricity retailers now offer contracts that continue indefinitely (rather than expiring at the end of a fixed term), but the discount expires after a 'fixed benefit period'. Fixed benefit periods are typically 12 or 24 months, but in some cases less. The move from fixed term contracts to evergreen contracts with fixed benefit periods is another example of retailers adapting their behaviour to circumvent the notification obligations in the NERR that encourage consumers to consider the appropriateness of their current electricity offers.

Under the NERR, retailers are required to inform consumers approaching the end of a fixed term market contract and are required to move consumers to the standing offer if the consumer does not take action to move to a new offer. There is no equivalent requirement

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317 *Electricity Industry Act 2000* (Victoria), s. 40C(1), *National Energy Retail Law (South Australia) Act 2011* (South Australia), Schedule, s.24(2)(a). In Tasmania, retailers must waive late payment fees to customers in certain circumstances (*National Energy Retail Law (Tasmania) Act 2012* (Tasmania), s. 19).

318 For example, CALC argues that pay on time discounts are discriminatory and "are in fact a late payment penalty in disguise". (CALC, 3 July 2017, p. 12).

about informing consumers at the end of a fixed benefit period and, while the ACCC understands that some retailers do voluntarily notify consumers at the end of a fixed benefit period, it is unclear whether this information is being provided in a form that is useful to consumers and whether consumers are benefiting from this practice. In particular, this correspondence has generally not detailed exactly how much more they will pay if they do not take any action.

Many concerns were raised in submissions about what happens at the end of a fixed benefit period. In many cases, consumers will be paying more as they no longer receive the discount or benefit that had been applied to that rate unless they take positive action to switch to a new offer.

Some stakeholders also raised issues with retailer behaviour at the end of a contract and concerns that retailers move consumers onto higher priced standing offers at the end of a contract term. This is another example of existing regulation having unintended consequences. While it was initially drafted to ensure that retailers did not switch consumers to new contracts without their explicit informed consent,[319] it enables retailers to benefit from consumer inaction. Those consumers that either do not bother to review their electricity pricing or who try to but encounter some barrier to understanding their options, are effectively penalised through paying higher prices.

The ACCC is particularly concerned that at least some of these consumers, and possibly a large proportion, are those least capable of paying more than they need to, i.e. concession holders, vulnerable consumers and consumers on hardship programs.

Many submissions made recommendations to minimise circumstances where a consumer loses their full discount at the end of a fixed benefit period or is moved to a higher priced rate at the end of a contract period. These options include:

- For fixed benefit periods, requiring upfront disclosure of any changes to the tariff that will occur at the end of the fixed benefit period and requiring notification ahead of the end of a fixed benefit period of changes to a consumer's offer. This information must enable consumers to make a decision regarding the ongoing appropriateness of their offer.
- For end of contract, rather than requiring retailers to switch consumers to the standing offer, require retailers to move them to the nearest matching offer that the retailer has generally available at that point in time.

It is clear that the current arrangements and practices are not serving consumers well, in particular there is limited understanding of what happens at the end of a fixed benefit period. While the Australian Government has recently sought commitments from retailers to address this issue and has lodged a proposed rule change with the AEMC that would impose an obligation on retailers to inform consumers at the end of a fixed benefit period, there is still some way to go to ensure that consumers are able to take advantage of the benefits of a competitive market (discussed in detail in section 4.3.3 below).

[319] See for example, NSW Minister for Resources and Energy, Second Reading Speech, National Energy Retail Law (Adoption) Bill 2012, Energy Legislation Amendment (National Energy Retail Law) Bill 2012, 23 May 2012, p. 5.

4.3.3. Outcomes from the Prime Minister's meeting with retailers

In August 2017 the Prime Minister, Australian Treasurer and Australian Minister for the Environment and Energy met with eight electricity retailers to discuss energy market reforms.[320] During these meetings, the eight retailers committed to:

- contact all consumers on expired discounts to advise how much they can save on a better deal
- contact consumers on standing offers to advise how much they can save on a better deal
- report on what they are doing to move electricity consumers to better offers and the number of electricity consumers that remain on expired discounts
- develop simple, plain English fact sheets with understandable comparison rates
- support a change to the electricity rules requiring companies to inform customers when their discount benefits end, setting out the dollar impact of doing nothing
- ensure that consumers on hardship programs will not lose any benefit or discount for late payment.[321]

The ACCC will monitor the implementation of these commitments and their success, including whether they should be rolled out or expanded, and will report on this in its final report in June 2018.

Rule change requiring notification prior to expiry of fixed benefit periods

On 12 September 2017 the AEMC published a consultation paper for a rule change to require electricity retailers to write to small customers between 20 and 40 business days before the expiry of a fixed benefit period to inform them of an upcoming loss of financial benefits, such as discounts.[322] If this proposed rule is implemented, retailers will be required to, amongst other things, advise small customers that the fixed benefit period is due to expire and give an estimate of the amount that will be payable by the small customer if they do not move to a new electricity offer. This rule change proposal will proceed under the expedited rule making process on a non-controversial basis and consultation on the AEMC's consultation paper closes on 10 October 2017.

AER work on fact sheets/comparison rates

The AER is due to release an issues paper shortly to commence the redevelopment of its Retail Pricing Information Guidelines, which prescribe the form and content of the price fact sheets that retailers use to present offer information to consumers. The AER is looking to identify ways to simplify price presentation and make it easier for consumers to compare offers and engage in the market. These may include comparison rates, graphic representations in place of lengthy and complex descriptions and other tools such as QR codes. The guideline revision will also be the subject of a wide-ranging consultative process and be informed by insights from the work of the Behavioural Economics Team of the Australian Government.

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320 The eight retailers are AGL, Alinta Energy, Energy Australia, Origin Energy, Momentum Energy, Simply Energy, Red Energy and Lumo Energy.

321 Prime Minister, Treasurer, Minister for the Environment and Energy, *A better deal for Australian families*, media release, Parliament House, 9 August 2017 and Prime Minister, Minister for the Environment and Energy, *Remarks at energy retailers meeting*, media release, Parliament House, 30 August 2017.

322 AEMC, *Rule changes: Notification of end of fixed benefit period,* viewed 12 September 2017, http://www.aemc.gov.au/Rule-Changes/Notification-of-end-of-fixed-benefit-period#.

4.3.4. Other marketing practices

Many submissions also noted concerns with other marketing practices of retailers, including the way that retailers attempt to 'win' consumers, the way that retailers retain consumers and the terms and conditions in consumer contracts. This behaviour is covered, to some extent, by the ACL and the NERL, however the ACCC is considering whether the existing regulatory regimes are sufficient to identify and deter retailers from engaging in conduct that confuses, misleads or intimidates consumers.

The ACCC notes that the AER does not have the ability to require individuals to appear before it and give oral evidence. The ACCC considers that for the AER to effectively investigate conduct that may breach existing regulation, the AER should also have the ability to require individuals to give evidence before it, similar to the ACCC's powers under section 155(1)(c) of the CCA. Governments should also consider whether the infringement notice penalties and civil pecuniary penalties for breaches of the NEL and NERL operate effectively and are sufficient to deter market participants from breaching existing regulations. The ACCC's findings in this area are set out in chapter 5 below.

Acquisition and retention

Many electricity retailers use direct marketing, such as door-to-door selling and telemarketing, to win new consumers. While the big three retailers no longer engage in door-to-door selling,[323] this is one of the key ways that smaller retailers acquire customers. Many retailers also use telemarketing to acquire customers or win-back customers that have decided to move to a new retailer.

As noted above, in some circumstances the behaviour of telemarketers and door-to-door sellers can breach the ACL. The ACCC has taken action against electricity retailers and marketing companies in respect of door-to-door marketing conduct in the past. Further detail is available in appendix 4.

A number of submissions expressed concern that cold calling and door-to-door sales can confuse or mislead consumers. For example, CALC stated that such "[m]arketing practices also confuse or misinform consumers trying to engage in the market. High-pressure sales tactics by cold calling or door-to-door sales have adverse effects and often lead to poor consumer outcomes."[324] CALC also queried the value of such practices other than in giving the seller an advantage, enabling them to "routinely sign consumers up for services they have not sought, do not need, and often do not even really understand."[325] Marketers, however, claim that smaller and new entrant players rely on this sales channel and direct marketing provides an ability to bring efficient and innovative products and services to market that may not be otherwise available.[326]

The ACCC recognises the importance of door-to-door selling for small retailers to increase market share. It is also one means by which consumers may become aware of options for their electricity supply that they would not otherwise have known about. However, when consumers enter into agreements with a retailer on the spot they do lose the benefit of being able to compare offers to determine what is best for them. The ACCC is considering whether current regulations around door-to-door selling appropriately balance the benefits for consumers with the risks that this style of marketing might create, and whether additional

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323 AGL, *AGL withdraws from unsolicited door-to-door sales,* media release, 26 February 2017; EnergyAustralia, *EnergyAustralia calls for an end to door-to-door energy sales,* media release, 24 August 2016; Origin Energy, *Origin to withdraw from door to door sales,* media release, 30 September 2013.

324 CALC, 3 July 2017, p. 10.

325 Ibid.

326 Sales Assured Limited, *Submission to ACCC Issues Paper*, 30 June 2017, pp. 1-2.

protections for consumers should be implemented to ensure that consumers are benefiting from contracting via door-to-door sellers.

Terms and conditions in electricity contracts

Many submissions raised concerns with the lack of transparency around electricity contract terms and difficulties that consumers face in understanding them. The disparity in bargaining power between retailers and their customers could give rise to problems with contract terms. The ACCC will consider the terms and conditions included in consumer and small business retail electricity contracts throughout the remainder of the Inquiry.

4.4. Tools to help consumers engage with the retail electricity market

With the rise in internet literacy, online search engines and comparator websites have become the preferred source of information for consumers researching energy offers.

4.4.1. Price comparators

Price comparator websites are operated by both governments and commercial entities. The government websites are required to display all 'generally available' offers. There is no equivalent requirement for commercial comparators. While government-run comparators typically operate free of charge to the user, commercial price comparators are remunerated either directly or indirectly by the retailers that they promote through the site.

Government-run price comparators

The AER operates the Energy Made Easy website, which includes information on generally available offers in Tasmania, the ACT, South Australia, NSW and Queensland (states and territories that have adopted the NERL). The Victorian government also operates a price comparison website, Victorian Energy Compare.

Many submissions to the Inquiry and statements at public forums noted that there is a relatively low awareness of government-run price comparators. Some submissions also noted that consumers often have difficulties accessing, using and understanding search results on price comparators. Consumer research also confirms that government comparator websites have low level of awareness.[327]

Consumer research undertaken by the AER earlier this year found consumers valued a number of the Energy Made Easy website's existing features, including that it contains offers from all energy providers and does not require personal contact details to perform a search (and so users do not receive follow up marketing contacts). Its role as a government-provided source of information was also viewed favourably.

At the same time, the research also found that given the various barriers to consumer engagement in the market, including complexities involved in switching, misconceptions about the market and wariness of aggressive sales tactics, the Energy Made Easy website would benefit from some redevelopment. The AER is considering how the website can provide clearer search pathways for different levels of user engagement (i.e. basic and more complex options), display simplified results, and include additional content such as tutorial style videos to assist users to navigate the site and understand more about the various offers and what might best suit them. Following the recent meetings between the Prime

[327] Newgate Research, April 2017, p. 7.

Minister and retailers, the AER is also examining options for enhanced functionality such as smart meter data upload and bill reading technology.

Clearly, consumer outcomes could be improved by encouraging greater use of government-run price comparators. Consumer awareness could be improved through the use of internet search engine optimisation and education campaigns. The AER's research recommended repeat exposure and brand identity building to promote greater awareness of the Energy Made Easy website.

The ACCC considers that to improve consumer awareness and understanding of the tools they can use in choosing an electricity offer, the Australian Government should consider additional resourcing for the AER to market, promote and improve the Energy Made Easy website as a tool to assist consumers in comparing energy offers. Consideration should also be given to improving and promoting Victorian Energy Compare. The ACCC's findings in relation to price comparators are set out in chapter 5 below.

Commercial price comparators

Submissions raised concerns about the conduct of commercial price comparator websites. These concerns included issues with sales tactics[328], and the basis on which these comparators recommend certain offers.[329]

It is common for retailers to have contracts in place with price comparator websites, however it is not always clear to consumers that a commercial price comparator has an affiliation with an electricity retailer or that it does not include all available offers in the consumer's area. During consultation, concerns were raised about the lack of disclosure of commissions that comparator websites receive from retailers, and the extent to which these commissions influence the offers that the comparators promote.[330] The ACCC considers that any commissions or affiliations should be disclosed to consumers using comparator websites to ensure consumers are not misled in terms of the impartiality of the advice given or offers proposed by the comparator.

Commercial price comparators are not subject to any specific legislation, but must comply with the ACL. There is also a voluntary Energy Comparator Code of Conduct (**Comparator Code**) which many commercial price comparators have signed up to.[331] The Comparator Code contains a number of commitments that signatories must comply with, but does not include features that the ACCC considers are important for any voluntary code, such as a complaints handling procedure where complaints can be lodged with an independent decision maker (if the signatory cannot resolve the complaint), monitoring, governance procedures, mechanisms to promote the code and sanctions for non-compliance. Some submissions consider that self-regulation under a voluntary code of conduct is not leading to the best outcomes for consumers.[332]

Submissions to the Inquiry made a number of recommendations to improve consumer confidence in commercial price comparators, including a national accreditation scheme for price comparators, and disclosure requirements relating to commissions.[333] Submissions also noted that commercial price comparators do not show all available retail offers.[334]

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328 Momentum Energy, 30 June 2017, p. 7.

329 Alinta Energy, 30 June 2017, p. 9. CitySmart, 21 June 2017, p. 2. Energy Australia, 30 June 2017, p. 29.

330 Momentum Energy, 30 June 2017, p. 7 and CALC, 3 July 2017, p. 10.

331 Consumer Utilities Advocacy Centre, *Energy Comparator Code of Conduct*, viewed 5 September 2017, https://www.cuac.org.au/consumer-and-community-resources/energy-comparator-code-of-conduct.

332 Energy Locals, *Submission to ACCC Issues Paper*, 30 June 2017, p. 16; Alinta Energy, 30 June 2017, p. 9.

333 Energy Australia, 30 June 2017, p. 29.

334 Momentum Energy, 30 June 2017, p. 7.

There are signs that commercial comparator websites are a source of innovation and have the potential to drive improved consumer engagement in the electricity market. However, the ACCC is concerned to ensure that commercial comparison websites operate in a manner that is transparent and does not mislead consumers. During the course of this Inquiry, where the ACCC identifies possible breaches of the ACL, it will investigate and take further action where appropriate. The ACCC will also consider how the current Comparator Code of Conduct could be further strengthened to ensure that it meets the ACCC's guide for comparator website operators and suppliers and guidelines for developing effective voluntary industry codes of conduct.

4.4.2. Other sales channels

In addition to comparison websites, there are two other types of services that consumers can use to find and switch to a new electricity offer.

Connection and brokering services

Connection services are third party service providers that provide connection to utilities such as electricity, gas, internet etc. especially when people move houses. Some retailers have ownership interests in connection service providers.

Energy brokering services are akin to brokers in other industries. Energy brokers analyse consumers' energy consumption to provide advice on the best offer and often also arrange for a consumer to switch retailer. Payment is either through commissions from energy wholesalers (and/or retailers) or fees charged directly to the consumer for their services. These services may be offered as part of a broader package of services (including energy efficiency assessments) to reduce a consumer's electricity costs.

Concerns were raised with these sales channels in submissions and at public forums. Consumers and businesses are concerned that connection and brokering services may not appropriately disclose commissions or ownership links to retailers, and also do not always make it clear whether they include all available offers in the market. Concerns were also raised that connection services may create a potentially misleading impression that they are officially related to the disconnection process, and also that brokers and switching service providers do not obtain explicit informed consent from consumers.

Automated switching services

Automated customer switching services, where a consumer signs up to the service and are switched to a new plan whenever a cheaper option is found, have developed in overseas markets (see Box 4.2 below).

Box 4.2: Automated switching services

The ACCC is aware of a number of services which switch consumers between energy plans on behalf of the consumer (i.e. no active comparison by the consumer is required as the third party provider undertakes this task).

'Flipper' is an online service available in the UK that provides a switching service for energy consumers.[335] Flipper charges an annual flat subscription fee of £25 (around A$41) but only where it saves subscribers at least £50 (around A$82). Flipper advertises potential savings for consumers of £385 (around A$634) per year or more. The operator of the service does not receive commissions from energy companies.

[335] Flipper, *Homepage,* viewed 25 August 2017, https://flipper.community.

Flipper uses billing data for consumers from the consumer's online energy account to determine which offers in the market are most suitable for the consumer, taking account of any exit fees and discounts. Consumer bills are reviewed four times per year to check if the consumer could be better off with a different deal.

Flipper switches energy provider or contract on behalf of the consumer, removing the need for the consumer itself to undertake a comparison between different offers. Consumers will be informed when they are switched to a new deal, being provided with all relevant details. Consumers have 14 days in which to cancel any switch made by Flipper.

Also in the UK is 'Voltz' – a mobile application that works like a mix of comparator website and advisory service. The service compares offers and every three months advises the consumer whether to remain on their current offer or switch to another cheaper offer.

At present there is no analogous service to Flipper or Voltz in Australia. However, Choice is currently undertaking a trial of its 'POWERUP' service for 100 consumers from NSW, Victoria, South Australia and south east Queensland based on a similar model to the Flipper service. POWERUP charges a $50 annual fee when it finds a consumer an offer that saves them at least $150. POWERUP advertises that it monitors every deal offered across the market.[336]

The ACCC is considering whether there are any limitations to automated switching services operating in Australia. In particular, the ACCC is considering whether the explicit informed consent requirements in the NERL may be acting as a real or perceived barrier to third party switching providers starting up in Australia. The explicit informed consent provisions require retailers to obtain a consumer's explicit informed consent before transferring them from another retailer or entering a consumer into a market retail contract.[337] The ACCC is also considering whether the switching process in Australia, which may take a number of months to move a consumer from one retailer to another, could also be discouraging third party switching providers from entering the market.

Throughout the remainder of the Inquiry the ACCC will consider whether changes to the NERL or retailer practices are required to encourage switching providers to start up in Australia. The ACCC will also consider whether regulation of third party switching providers is necessary, to ensure clear and transparent disclosure of terms and conditions and/or limitations on switching providers receiving commissions from retailers when they switch customers.

4.4.3. Comparison or reference price

One way to assist consumers to compare and choose an electricity offer is to introduce a reference or comparison price, where the overall cost of an electricity offer is presented on either a per unit basis or for a period of time (for example, quarterly or annual costs). Reference prices are widely used in markets including telecommunications (minimum annual costs) and finance (comparison interest rates) to provide simplified offer information to consumers.

In the financial sector, the comparison rate assists consumers to work out the true cost of a loan by reducing it a single percentage figure (the interest rate plus most relevant fees and charges). This enables consumers to compare loans from different lenders.[338]

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336 Choice, *POWERUP FAQ*, viewed 25 August 2017, https://powerup.community/faq.

337 *National Energy Retail Law (South Australia) Act 2011* (South Australia), Schedule, s. 38.

338 Australian Securities and Investment Commission, *Comparison rates*, viewed 29 August 2017, https://www.moneysmart.gov.au/borrowing-and-credit/home-loans/interest-rates/comparison-rates.

The ACCC received many submissions recommending an energy comparison rate, akin to that used in the banking industry, as it would enable consumers to compare different energy plans on a like-for-like basis. At a meeting with the Prime Minister, Australian Treasurer and Australian Minister for the Environment and Energy, some electricity retailers committed to work with the AER to develop fact sheets with comparison rates. As outlined above, this process will start shortly with the release of an issues paper by the AER.

The ACCC considers that a well-designed comparison rate could assist consumers to determine the most appropriate electricity plan for their circumstances, as it is currently difficult to compare plans that contain different variable and fixed charges and other fees, charges and incentives.

In the UK, the concept was embodied in a 'tariff comparison rate' (**TCR**) that was required to be included in all retailer communication with consumers (including bills) between July 2014 and June 2017. The TCR represented the cost of a tariff for a typical consumer. It assumed a medium level of energy usage, and included the unit rates, standing charges and discounts that applied to a given tariff. It also included the value of bundled products, where these were capable of being expressed in £ per kWh or £ per year.[339]

Ofgem decided in 2017 to remove the TCR, as part of its move towards a more principles-based approach. Its rationale for removing the TCR was two-fold:

- as tariff structures become more complex, assumptions in the TCR regarding consumption for a typical user may be increasingly misleading
- evidence suggested that the TCR has not been particularly useful. There was low awareness of the measure and consumers considered that it was of limited value as it may not reflect their electricity usage.

Ofgem suggested that the growing use of price comparison websites represented a more effective means of comparing tariffs.[340]

One challenge with implementing a comparison rate for electricity is that different individual circumstances can have large impacts on the end price that a consumer will end up paying. For example, a low energy user will generally be better off on a tariff that includes a low fixed charge and a relatively high usage charge. A different, high-volume consumer will generally be relatively better off on a tariff with a lower usage charge and a relatively higher fixed charge. More complex tariffs where costs vary based on the time of day electricity is consumed, or a consumer's maximum usage at a point in time, are even more sensitive to assumptions around typical usage. Capturing these differences in a single comparison rate is challenging.

Tariffs also vary across distribution network areas, limiting the ability of retailers to present meaningful comparison rates relating to offers that apply across a state or nationally. These factors are likely to make it difficult to implement a comparison rate that presents a single headline 'price' for electricity to use in generic marketing materials.

These difficulties are not insurmountable. Comparison rates for electricity are already used in comparison tools which utilise an individual's actual or estimated energy usage (based on key household characteristics). For example, the AER's Energy Made Easy website provides a comparison price for all available contracts based on the consumer inputting usage details from a recent bill, or using an estimate of electricity usage (based on the number of household occupants, and whether the consumer has a gas connection or a pool). However,

339 Ofgem, *Tariff Comparison Rate*, viewed 25 August 2017, https://www.ofgem.gov.uk/key-term-explained/tariff-comparison-rate-tcr.

340 Ofgem, *Helping consumers make informed choices – proposed changes to rules around tariff comparability and marketing*, August 2016.

these comparison rates are not consistent and different price comparators may deliver different results for a consumer with the same inputs.

Some retailers also apply comparison prices to their offers for consumers searching online. These prices, however, are usually not displayed on high level advertising material. Rather, consumers must first indicate which distribution network the connection relates to and the type of tariff. Some retailers present information for a typical consumer, while others ask for a consumer's actual usage profile before providing an estimate. Following the meeting between the Prime Minister, Australian Treasurer and Australian Minister for the Environment and Energy and eight retailers, the AER is exploring the development of a comparison rate.

4.4.4. Metering and access to usage data

As detailed in other parts of this report, the most appropriate electricity plan for a consumer will depend heavily on the nature of the consumer's electricity usage. Data on usage is collected through a consumer's electricity meter, either through manual readings in the case of accumulation meters or electronically in the case of smart meters. In either case, retailers base consumer bills on metering data.

Smart meter data, which can show near real-time electricity usage, is much richer than the data collected from accumulation meters, which only shows the amount of energy used over a period in between manual meter readings. For this reason, smart meter data can also be used by consumers to manage demand, particularly in response to time of use tariffs. For example, a consumer with a smart meter is able to interpret their usage data to decide the best time of day to use energy intensive appliances like washing machines, dishwashers and even to charge electric vehicles.

The ACCC sees enormous potential for the use of consumer data to drive better outcomes for electricity consumers. Enhanced access to and use of data may also open up energy and related services, for example driving investment in solar PV and battery storage and new technology services aimed at controlling home energy use. At present, the availability of data and consumer awareness of the ability to access data falls well short of that necessarily to realise significantly better outcomes for consumers.

Currently, there are minimum standards that retailers and distributors must meet regarding the format, timing and cost for delivery of usage data to a consumer or their authorised representative.[341] Retailers and distributors must provide consumers with their usage data on request four times a year at no charge. The information must be given to the consumer within ten days of the request.

The ACCC is concerned that despite these minimum standards, the process for consumers (or third parties on their behalf) to access and use this data is unnecessarily difficult and this acts as a significant barrier to the data being used to benefit consumers. In particular, there are:

- poor levels of awareness among consumers that they can access their own data
- the process for requesting data is often unnecessarily complex, involving many steps and the process is different depending on the distributor and/or retailer responsible for providing the data
- the data itself is not presented in a way that is meaningful for consumers. For example it is often provided in spreadsheet format with poor labelling or guidance on what the information relates to or represents

[341] AEMO, '*Metering Data Provision Procedures*', 1 March 2016.

- there is no simple way for consumers to authorise third parties to access data on their behalf, for example by providing electronic consent
- the data housed by distributors/retailers is not required to be in a uniform format and this may make it difficult for third parties to use the data

Even if consumers had better access to their data sourced from manual reading of accumulation meters this does not provide any additional utility to a consumer over and above what is available on their bill. Consumers need smart meters to gain access to meaningful usage information. Most Victorian consumers have smart meters, following a mandatory smart meter rollout between 2009 and 2014. However, the ACCC understands that at present, less than 4 per cent of residential consumers households in other NEM regions have smart meters. It is estimated that smart meters will be rolled out in other NEM regions at a higher rate after the Competition in Metering rule commences on 1 December 2017.[342]

Box 4.3: Smart Meter Texas

Smart Meter Texas (SMT) is a website collaboration by a number of utility companies in the state of Texas, USA and endorsed by the Public Utility Commission of Texas.[343] The site stores daily, monthly and at 15-minute intervals electric usage data recorded by digital electric meters (smart meters), and provides secure access to that data (including through the use of 'Green Button').

In addition to acting as an interface for access to smart meter data, SMT enables secure communications with a consumer's in-home devices, and provides a convenient, easy-to-use process whereby consumers can voluntarily authorise market participants other than the consumer's retail electric provider (i.e. third parties) to access their electricity usage information and in-home devices.

By providing timely access to electric usage data and secure communication with in-home devices, SMT enables consumers to better manage their energy consumption to lower their monthly electricity bills, and benefit from new products and services offered by retail electricity providers and third parties.

The 'Green Button' application lets a consumer download their energy usage information from SMT based on a nationally standardised format. The consumer can then load the information into programs obtained from third party entities to help manage their electricity use.

Third party services have emerged which use the information available through SMT. For example 'Awesomepowertexas.com' is a website that enables users to upload their data obtained through SMT to assist in choosing a retailer provider of electricity.[344]

Current initiatives to improve access to data

There are a number of initiatives underway to improve consumers' access to data.

On 8 May 2017 the Productivity Commission released a report on data availability and use.[345] The report examines a range of issues including the benefits and costs associated with making public and private data more widely available, options for collecting, sharing and releasing data, how consumers can benefit from access to data and how to maintain

342 AEMC, National Electricity Amendment (Expanding competition in metering and related services) Rule 2015 No. 12, rule 7.8.3(a), which commences on 1 December 2017.

343 Smart Meter Texas, viewed 22 August 2017, https://www.smartmetertexas.com/CAP/public/home/home_about_us.html.

344 Awesome Power Inc., Texas (United States), viewed 22 August 2017, http://awesomepowertexas.com.

345 Productivity Commission, *Data Availability and Use Inquiry, Productivity Commission Inquiry Report*, 31 March 2017.

individual privacy and control over data use. The Productivity Commission's report proposes a number of reforms intended to improve the way Australians use and share data, in particular the Productivity Commission recommended a new economy-wide right for consumers to access and transfer their consumer data. The ACCC made a submission supporting the Productivity Commission proposals and agrees that there are significant competition and consumer benefits to be realised from the greater availability and use of consumer data.[346]

In response to the Productivity Commission's report, the Department of Prime Minister and Cabinet has set up the Data Availability and Use Taskforce (**the data taskforce**). The data taskforce is responsible for preparing the Government's response to the Productivity Commission's report. The ACCC understands that these reforms have the potential to provide an economy-wide framework for greater use of consumer data, and could therefore encompass electricity consumption data. For the reasons discussed above, the energy sector is also a clear candidate for initial implementation of the reforms should a staged rollout occur.

An important step to improving access to data for consumers was a recent AEMC rule change 'Expanding competition in metering'; the rule change takes effect on 1 December 2017. The rule change means that any person can be a provider of meter services (currently, distribution networks undertake this role). The consumer will negotiate with the retailer or a third party to install a smart meter. The objective of such a rule is designed to foster innovation and investment in smart meters.

The rule change also provides a framework for the commercial provision of electricity consumption data to parties that provide services (for example, mobile phone applications).

Another important piece of work is being undertaken by an Energy Consumers Australia working group. This working group is developing a code for managing the business to business arrangements around third party access to data and associated privacy issues associated with this. The working group will develop a 'common contract' for the management of consumer data with third parties (with a focus on privacy requirements). Energy Consumers Australia is currently consulting on a discussion paper for this project.

As part of the National Energy Productivity Plan, the COAG Energy Council agreed to work with industry to improve consumer access to consumption data, including by simplifying processes for consumer consent, developing options for timely delivery of data and standardising data formats. This work is scheduled to commence in late 2017.

The ACCC sees enormous potential for the use of consumer data to drive better outcomes for electricity consumers, both in the selection of the most appropriate plan and in managing demand.

Many services are available internationally that enable consumers to engage a third party to monitor their consumption and to switch them to offers that will save them money, for example the Flipper service outlined above. A number of steps need to be taken to enable the development of similar services, these may include legislative amendment, installation of smart meters, and an easy method for consumers to give third party providers their permission to access and use their consumption data.

It is essential that consumers have access to their electricity consumption data in a standardised format. The current work being undertaken by the Data Availability and Use Taskforce is the first step towards improving consumers' access to and use of electricity consumption data. Throughout the remainder of the Inquiry, the ACCC will consider the

[346] ACCC, *ACCC submission to Productivity Commission draft report on Data Availability and Use Inquiry*, 11 January 2017.

implementation of the data taskforce's recommendations, along with the work being undertaken by the electricity industry to ensure that consumers have access to data in a way that enables them to make informed decisions about electricity services or authorise a third party to do this on their behalf.

4.5. Vulnerable consumers

Some consumers face particular difficulties engaging in the retail electricity market. These include those facing income poverty and/or social and cultural barriers.

Although consumers can fall into short term difficulties due to disruptive life events (like losing a job or interruption to employment from childbirth) some consumers may face longer term vulnerability. Consumers with longer term vulnerability may include those from a culturally and linguistically diverse background and those with a disability or chronic illness. Consumers with low literacy levels (language, financial and computer literacy), sole-parent families, those in housing stress and the unemployed may also face longer periods of vulnerability.

Consumers that have experienced payment difficulties in the past, or are currently experiencing payment difficulties, may not have access to all offers and retailers in the NEM. Internal retailer documents indicate that many retailers actively seek to maximise the number of 'high value' consumers and minimise potentially 'low value' consumers. When it comes to acquiring new consumers, many retailers run credit checks on prospective consumers before they accept their application. Some retailers also specifically target their marketing to more affluent socio-economic areas.

We received a large number of submissions from consumers, regulators, academics, consumer organisations, not-for-profit groups, associations and businesses commenting on the difficulties faced by vulnerable consumers when dealing with electricity retailers. Submissions detail the numerous ways in which consumers may be vulnerable, and the different ways that vulnerability can affect consumers' ability to engage with the retail electricity market.

4.5.1. Vulnerable consumers more likely to be disengaged

Vulnerable consumers share the same drivers and values of other consumers but can face additional barriers to accessing the benefits of a competitive market. This may lead to higher levels of disengagement in the retail electricity market[347] and disengaged consumers are more likely to be on high priced standing offers given that retailers are required to move consumers to standing offers at the end of a contract if they do not choose a new offer.

Some retailers have voluntarily implemented or supported specific assistance programs. Many retailers also publish on their websites energy saving tips to educate consumers about practical actions they can take in order to reduce their energy usage around the house.

[347] CALC, 3 July 2017, p. 3.

Box 4.4: Switched on Communities

In 2016–17 AGL and the Queensland government jointly funded the Switched on Communities program. Under this program, the Queensland Council of Social Service (**QCOSS**) made funding available to community organisations in south east Queensland to improve consumer access to information on retail electricity pricing, contracts and offers and increase the number of electricity consumers actively shopping around for a better electricity deal.[348] Funding was prioritised for organisations supporting seniors, people with disability or their carers, those suffering financial hardship, culturally and linguistically diverse consumers and Aboriginal and Torres Strait Islander people. The AER provided training to QCOSS representatives on the Energy Made Easy website.

QCOSS issued grants to nine organisations. Each organisation worked with their consumers to explain bills, what to look for when reading a bill, to explain what concessions are available, to explain how consumers should approach retailers and how to shop around for different offers. The advice was given through a range of events that consumers could attend including community festivals, expos, group sessions and one-on-one sessions.

Each organisation reported positive results from their activities and improved outcomes for consumers in south east Queensland including discounted retail offers, greater access to concessions and increased confidence to use price comparators and to engage with electricity retailers. QCOSS is finalising its report from the program and this will be available on its website shortly.

Direct engagement by community organisations is an effective way to assist some vulnerable consumers, particularly those unable or reluctant to use online services, to better engage with the retail electricity market. However, not all vulnerable consumers are averse to using online technologies and direct initiatives will never be able to reach all consumers. For this reason, the ACCC considers that more can and should be done by retailers and other stakeholders to create targeted products and services for vulnerable consumers like, for instance, the Brisbane City Council's 'reduce your juice' campaign.[349]

Changes to reduce the complexity of electricity offers and to provide greater transparency and consistency over discounting and other marketing practices will assist all consumers to better engage with the market, but vulnerable consumers will require greater assistance.

4.5.2. Vulnerable consumers may be paying too much for electricity

According to the AEMC, certain groups of low income or income stressed households can miss on average 3.6 payments per year.[350] This also places vulnerable consumers at greater risk of disconnection. Among other things, disconnection has a negative impact on health and wellbeing, prevents consumers from using heating and cooling and may affect their ability to participate in education and employment.[351] High electricity bills have also forced some households to trade off paying their energy bills with other needs, such as buying food.[352] Submissions to the Inquiry also noted that hardship and disconnection is an emerging issue for small business.

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348 QCOSS, *Switched on Communities Grants,* viewed on 22 August 2017, https://www.qcoss.org.au/switched-communities-grants.

349 CitySmart, *Reduce your juice,* viewed on 28 August 2017, https://reduceyourjuice.citysmart.com.au/.

350 Newgate Research, *Understanding vulnerable customer experiences and needs,* June 2016, p. 22.

351 The Climate Institute, Brotherhood of St Laurence and the Australian Council of Social Service, 'Empowering disadvantaged households to access affordable, clean energy', p. 55.

352 Dr Lynne Chester, *The Impacts and Consequences for Low-Income Australian Households of Rising Energy Prices*, University of Sydney, p. 6.

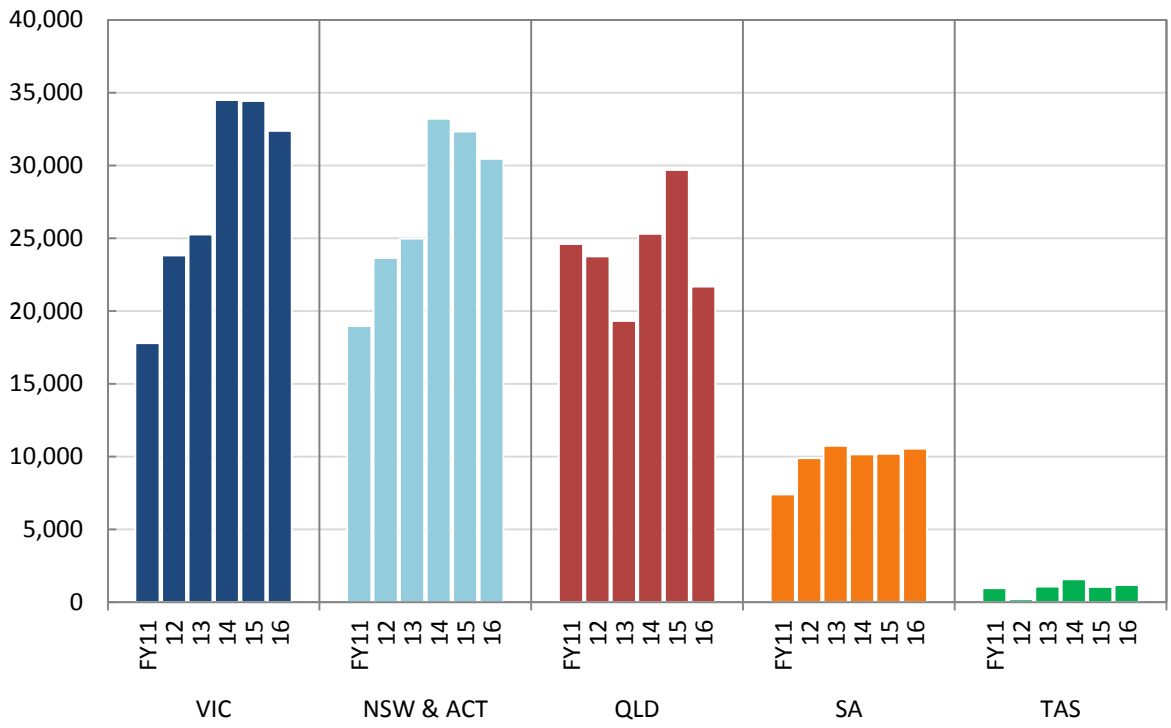
While energy affordability is a complex issue that relates to broader questions associated with household income and expenditure, it is clear that minimising the disruption that comes from disconnection and persistent payment difficulties must be addressed through both supply and demand side measures. Governments are exploring targeted programs and regulatory options to improve energy efficiency in vulnerable households through state based schemes and the National Energy Productivity Plan. Similarly consideration is required on the supply side, including retailer hardship policies and approaches to debt management. Improving outcomes for vulnerable consumers earlier in the cycle will reduce the impact on those households but also potentially save retailers the costs associated with debt collection and bad energy debts.

Disconnections

In 2015–16, approximately 96,000 (approximately 1 per cent) of residential consumers were disconnected as a result of non-payment across the NEM.[353] Between 2010–11 and 2014–15, residential disconnections due to non-payment increased at a steady rate in all NEM regions. In 2015–16, disconnections decreased by 6 per cent and 7 per cent in NSW and Victoria respectively, but increased again in South Australia and Tasmania.

Figure 4.2 below shows the number of disconnections in each NEM region over the past five years.

Figure 4.2: Residential disconnections by NEM region (2010–2016)



Source: Australian Energy Regulator, Disconnections (residential) - times series, ESC Victoria, 2015–16 Victorian Energy Report, QCA, Small electricity customer disconnection, hardship and complaints statistics reports from 2010, 2011 and 2012.

The numbers of disconnections are more alarming when you consider the number of consumers that have been disconnected on multiple occasions as disconnections of consumers who had previously been disconnected rose from 10 per cent in 2014–15 to 18

[353] Based on the ACCC calculations using AER, *Retail statistics small customer numbers – time series*, viewed 1 September 2017; ESC Victoria, *2015–16 Victorian Energy Report*, p.80.

per cent in 2015–16 across the NEM. These increases suggest more consumers may be experiencing long term and/or severe financial difficulties, and hardship programs may not be adequately supporting consumers to avoid disconnection.[354] The St Vincent de Paul Society has found that where several households in a community have been disconnected on more than three occasions, these communities are arguably communities with entrenched poverty or ongoing financial hardship.[355] These communities may need improved government support mechanisms, and energy retailer hardship programs and practices. While improving electricity affordability will not resolve issues of entrenched poverty, the ACCC considers that it is an important step to helping those consumers in greatest need.

Under the NERL, energy retailers are required to offer payment plans or hardship assistance to consumers who indicate they are in financial hardship before considering disconnection for non-payment of a bill. Retailers are also limited in when they can disconnect consumers. For example, the NERL prohibits retailers from disconnecting a consumer's premises for non-payment of a bill where the amount outstanding is less than an amount approved by the AER (currently $300) and the consumer has agreed to repay that amount.[356] It is important to note that irrespective of the amount owed, a retailer cannot disconnect a consumer if they are adhering to a payment plan or participating in a retailer's hardship program (further detail on hardship programs is set out below). Additionally, disconnection is not permitted when a consumer's premises are registered as requiring life support equipment.

Measures to assist consumers facing financial difficulties

There are a number of tools available to consumers if they are facing financial difficulties. In particular, retailers must have hardship policies for consumers, many consumers are entitled to state and territory concession schemes and consumers are able to access dispute resolution services provided by energy ombudsman schemes that operate in each NEM region. However, the ACCC understands that there is low awareness of these tools.

Hardship policies

To address electricity affordability issues faced by vulnerable consumers, electricity retailers are required to have hardship policies under the NERL and the Victorian Retail Code. Hardship policies are designed to support consumers that are having difficulties paying electricity bills. Under the NERL, each retailer's hardship policy must meet minimum requirements and be approved by the AER.[357]

The ACCC received a number of submissions recommending improvements to hardship policies.[358] While retailers each have hardship policies and sometimes additional programs to assist vulnerable consumers, some vulnerable consumers are not aware of these policies or, if aware, can be hesitant to ask for help. The AER is currently conducting a review of retailers' hardship policies, with a focus on four key elements – the attitude and culture of the retailer, early detection, systems and processes, and consumer outcomes. ESC Victoria completed an inquiry into energy hardship policies in 2016.[359]

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354 AER, 2017 State of the energy market, p. 154.

355 St Vincent de Paul Society, *Households in the dark*, May 2016, p 39.

356 *National Energy Retail Law (South Australia) Act 2011* (South Australia), Schedule, s. 116(1). In March 2017, following a consultation process, the AER announced that the minimum disconnection rate should be left at $300 (AER, *Review of the minimum disconnection amount, final decision*, March 2017).

357 Minimum requirements for hardship policies include processes to identify residential customers experiencing payment difficulties due to hardship, flexible payment options, and processes to identify relevant government concession programs and financial counselling services (*National Energy Retail Law (South Australia) Act 2011* (South Australia), Schedule, s. 44).

358 Energy & Water Ombudsman NSW, June 2017, p. 9; Energy Consumers Australia, July 2017; Public Interest Advocacy Centre, *Submission to ACCC Issues Paper*, July 2017, p. 5.

359 ESC Victoria, *Energy Hardship Review*, March 2016, viewed 30 August 2017, http://www.esc.vic.gov.au/project/energy/6389-energy-hardship-review/.

Some retailers take additional steps to assist consumers experiencing hardship and have voluntarily implemented or supported specific assistance programs. Many retailers also publish on their websites energy saving tips to educate consumers about practical actions they can take in order to reduce their energy usage around the house.

Following Simshauser and Whish-Wilson's research (detailed in section 4.2.2 above), AGL announced internal efforts to reduce the prevalence of vulnerable consumers on high standing offers in Victoria through its 'Fairer Way' program.[360] Amongst other things, under this program, AGL committed to not charge concession card and hardship consumers late fees and to offer consumers on hardship programs guaranteed discounts. AGL also jointly funded the Switched on Communities program managed by QCOSS (described above).

On 9 June 2017 EnergyAustralia announced that it would commit $10 million to financial and other support for its most vulnerable electricity and gas consumers. The funding will reportedly be used to expand EnergyAustralia's current hardship program and to do research into alleviating chronic, long term hardship.[361]

Following price rises in mid-2017, Origin Energy implemented an initiative to freeze the impact of price increases for its hardship consumers in South Australia, Queensland and NSW for 12 months.[362]

Some recent state government initiatives are also focused on ensuring vulnerable consumers are not on high priced offers. In its 2017–18 budget, the Victorian Government allocated funds to establish a pilot energy brokerage service to support hardship and culturally diverse consumers find an appropriate energy offer; and the South Australian Government has announced its intention to negotiate a preferable electricity offer with retailers that will be available for any concession card holder. There are also initiatives that provide assistance to consumers to reduce their electricity usage, for example through more energy efficient products and appliances.

While it is important to ensure vulnerable consumers are treated appropriately, this approach of direct intervention for a sub-group of consumers does not address the more fundamental question of why a large number of consumers find themselves on poor offers. There are valid questions about whether consumers can effectively navigate the market to determine which retailer and offer reflects the value they place on electricity supply. This question applies to all categories of consumers, not just the vulnerable.

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360 AGL, *AGL announces A Fairer Way Package for vulnerable consumers*, media release, 17 March 2017.

361 EnergyAustralia, *EnergyAustralia expands hardship support,* media release, 9 June 2017.

362 Origin Energy, 30 June 2017, p. 34.

State and territory concession schemes

Each state and territory government operates concession schemes to relieve some of the financial pressures on vulnerable consumers. These concession schemes differ from state to state, but generally include concessions for pensioners, those on health care cards and those with disabilities.[363] Consumers are generally able to apply for more than one concession where applicable. Most concessions are a set dollar figure, with the exception of Victoria, where the concessions are a percentage discount from the total bill.

A number of submissions and statements at public forums raised concerns with the current concession regimes, particularly the inconsistency between states, the fact that fixed concession amounts do not change when electricity prices increase and the ineffective targeting of concessions. For example, a single pensioner in Sydney with an eligible concession card with a bill of $1,054 per year (low energy user) will get $235 per year or 22 per cent of energy costs, whereas a family of five receive the $235 rebate plus a $15 family energy rebate for an annual bill of $2,856.34[364] which is the same as a household of four also holding a concession card but with an average annual bill of $2,678. The ACCC shares the concern of the AEMC and other stakeholders that the current approach to energy concessions requires the direct attention of COAG to ensure consistency between state based schemes and ensure that support is reaching those most in need.

The ACCC acknowledges that some retailers are undertaking important voluntary actions to improve outcomes for vulnerable consumers to ensure these consumers are not being impacted by high standing offers, or finding themselves on offers that will result in them paying high prices if they are unable to pay on time. However, the ACCC considers that this issue has been of concern for some time and that something must be done to improve outcomes for vulnerable consumers. The ACCC's preliminary findings in this area are set out in chapter 5 below.

Ombudsman schemes

The state and territory ombudsmen are industry funded bodies that receive, investigate and facilitate the resolution of consumer complaints about electricity and gas companies. Under the NERL, retailers are required to be a member of these schemes and consumers are able to refer a number of types of complaints to the relevant ombudsman for disputes resolution.[365] Concerns have been raised with the ACCC that there is low awareness of energy ombudsmen, and consumers generally find out about ombudsman schemes from word of mouth or internet searching, rather than from their electricity retailer. Concerns have also been raised that many consumers that are experiencing financial difficulties mistakenly consider that they are unable to make a complaint as the debt has already been incurred, and therefore must be paid. Throughout the remainder of the Inquiry the ACCC will consider actions that can be taken to improve the awareness of ombudsman schemes.

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363 Victoria: Annual Electricity Concession, the Service to Property Charge Concession, the Non-Mains Energy Concession, the Medical Cooling Concession, the Controlled Load Electricity Concession, the Life Support Concession, the Electricity Transfer Fee Waiver and/or the Excess Electricity Concession.

NSW: Low Income Household Rebate, the Medical Energy Rebate, the Life Support Rebate and the Family Energy Rebate. Eligibility for these concessions depends on a range of factors.

South Australia: Energy Bill Concession, the Medical Heating and Cooling Concession, the Residential Park Resident Concession and/or the Home Dialysis Electricity Concession.

Queensland: Electricity and gas rebates, home energy emergency assistance scheme, electricity life support, medical cooling and heading concession scheme, electricity and gas rebates for residential home parks and multi-unit residential premises.

ACT: utilities concession (covering electricity, natural gas, water and sewerage) and a Life Support Rebate.

Tasmania: Annual Electricity Concession, the Heating Allowance, the Life Support Concession and/or the Medical Cooling or Heating Concession.

364 Based on NSW Auditor General, *Performance Audit: Energy rebates for low income households*, September 2017, p. 9.

365 *National Energy Retail Law (South Australia) Act 2011* (South Australia), Schedule, Part 4.

Measures for improving energy efficiency

Consumers need to be aware of their energy costs and energy use to reduce their energy bills. Consumers also need to be informed of their options, and be able and willing to make changes to their energy use, including changing day to day activities. Retailers play an important role in providing information on what consumers pay (through bills). Under the NERL, retailers are required to provide information on how to be more energy efficient to consumers in hardship.

However, households may find it difficult to institute changes to reduce energy use, particularly if they have fixed routines, for example households with children. Research into the use of devices to help reduce electricity consumption indicates that in order for these devices to work smoothly, all household members need to regularly use a smartphone to control the devices. This requirement is more difficult for households with younger children.[366]

To date, the information provided by retailers to consumers on hardship programs has largely been limited to providing electricity audits and general information on government energy efficiency schemes and how to use energy more efficiently. The National Energy Productivity Plan has identified opportunities for more personally meaningful information and tools for consumers to promote greater energy efficiency, for example mobile applications that help households reduce energy use.

The ACCC notes that, at least in the short term, many consumers will not be able to access technologies and devices to assist them in managing and reducing electricity consumption and that steps must be taken to ensure that retail electricity services are more affordable, regardless of any steps taken to reduce electricity consumption.

Renters and those outside the traditional energy market

Housing options impact household electricity costs. In particular, consumers living in rental accommodation or within an embedded network are limited in their energy choices. While it is not always the case, many vulnerable consumers are living in rental accommodation and/or are living in an embedded network.

Embedded networks are sites with multiple households or businesses (typically apartment blocks, retirement villages, caravan parks and shopping centres) where electricity to the site is provided through a single network connection point. The site operator purchases all the energy required at the site and then on-sells it to the tenants or residents based there. Consumers located in embedded networks have limited access to alternative suppliers of electricity.

In its review of renters in the electricity market, QCOSS noted that rental properties are far less likely to have energy efficiency measures like insulation and solar panels.[367] QCOSS also identified barriers to accessing certain retail products because either a history of bills was required or the bundling of offers with smart meters (which requires lessor approval).

There is a growing number of renters (as well as some owners) that also find themselves outside the traditional retail market, in embedded networks, essentially private networks operated by a single seller. For those who are satisfied with their service and have no issues with their ability to pay their energy bills, this option can present benefits (like bundling all their accommodation and utility costs or wholesale energy rates). There are consumers,

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366 Nicholls, Dr L, Strengers, Dr Y, and Tirado, S, *Smart Home Control: Exploring the potential for off-the-shelf enabling technologies in energy vulnerable and other households*, RMIT, Centre for Urban Research, p. 4.

367 QCOSS, *Choice and Control? The experience of renters in the energy market,* June 2017, p. 21.

however, that are not benefitting due to reduced consumer protections and/or higher prices. The AER,[368] QCOSS,[369] and the Energy and Water Ombudsman NSW[370] have raised concerns about the issues facing consumers and particularly renters in embedded networks separate to this Inquiry.

Renters may also have difficulties making improvements to their properties to increase energy efficiency as they are unable to obtain consent from landlords or reluctant to seek approval.[371] Improving features such as an inefficient hot water system can reduce a household's annual consumption by 762 kWh.[372]

The AEMC has been tasked by the COAG Energy Council with reviewing consumer outcomes as well as their protections under the NERL for embedded network consumers. The ACCC will consider issues facing these consumers throughout the remainder of the Inquiry.

4.6. Approach in the United Kingdom

In the United Kingdom, Ofgem has set Standards of Conduct for retailers in the energy sector (**the Standards**).[373] The Standards are enforceable principles that require suppliers to treat domestic and small business consumers fairly. In August 2017, Ofgem decided to amend the Standards to change the 'fairness test'. This change will take effect on 10 October 2017 and will shift the focus of the fairness test to consideration of whether a retailer's conduct will gives rise to a likelihood of detriment to a customer, unless the detriment would be reasonable in all the relevant circumstances.[374] Ofgem describes these changes as requiring retailers to "put consumers at the heart of their business and treat them fairly."[375]

The ACCC will consider the implementation of the Standards in the United Kingdom throughout the remainder of the Inquiry closely in forming its recommendations on potential amendments to the NERL.

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368 AER, *AER submission in to the AEMC Review of embedded networks regulatory arrangements*, May 2017.

369 QCOSS, June 2017.

370 Energy & Water Ombudsman NSW, *Submission into the AEMC Review of embedded networks regulatory arrangements*, May 2017.

371 Johnson, V, Totty, J & Sullivan, D, *Improving the energy efficiency of homes in Moreland: Warm Home Cool Home and Concession Assist social research final report*, 2013, p. 3.

372 Brotherhood of St Laurence, *Home Energy Efficiency Upgrade Program: Final Report*, August 2016 p. ix.

373 Ofgem, *Decision to modify the domestic and non-domestic Standards of Conduct,* 14 August 2017.

374 Ibid, p. 4.

375 Ibid, p. 2.

5. Where to from here?

The preceding chapters have highlighted the issues, challenges and concerns that the ACCC believes are fundamental to addressing electricity affordability, and which will guide our future work in the Inquiry. In summary, the concerns identified in the first part of the Inquiry are as follows:

1. There appears to be insufficient competition in both generation and retail markets, which both raises prices and increases barriers to entry. The lack of availability and high price of gas has also increased the price of electricity.
2. There appears to have been over-investment in electricity network operators, inefficient cost recovery and higher than warranted rates of return, due to the network regulation framework which has led to increased costs for consumers. Some of these costs represent a continuing burden on consumers.
3. Some measures to improve environmental sustainability have been overly generous and poorly targeted, with outcomes that appear inequitable.
4. Retail deregulation has benefited some and hurt others. The market is exceptionally complex, and consumers have no ability to exit the market. We need to understand what is required for the market to work effectively, and to ensure that consumers have the tools to enable them to make informed decisions about their electricity services.

The ACCC's Inquiry is only a third of the way through. There has only been a short time in which to analyse much of the information we received from retailers in August and September. Further analysis over the coming months, combined with additional information we will be seeking from industry, will help us address the above issues.

The solutions to Australia's affordability problem will not be straightforward, nor is there a 'silver bullet' that will address all problems. Some mistakes of the past are beginning to be unwound, while others, unfortunately, will affect electricity markets and consumers for decades to come.

The ACCC's focus for the remainder of the Inquiry is to identify practical, viable and meaningful measures that will ease the pressures on electricity prices for Australian households and businesses. This chapter sets out the agenda for the ACCC's work between now and June 2018. While the ACCC will investigate each of the areas detailed below, it may not make final recommendations on each area. The ACCC will focus on determining the key drivers of the energy affordability problem and barriers to consumers engaging with the market, and delivering clear findings and recommendations for governments to resolve these issues.

5.1. Boosting competition in generation and retail markets

Effective competition is essential to improving affordability. Wholesale markets are too concentrated and retail competition is not operating as effectively as it should. Solutions to improve outcomes in these markets are likely to involve:

- increased generation capacity, particularly from non-vertically integrated new entrants, in those regions where AEMO has found there is a risk of supply shortfalls—NSW, Victoria and South Australia
- constraints on further consolidation of ownership of existing generation assets
- taking steps to unwind previous consolidation of generation assets, for example of state-owned generators in Queensland

- efforts to improve the availability and affordability of gas as an input for gas powered generation that has become increasingly pivotal in setting the price in wholesale markets
- large scale renewable energy projects playing a role in reducing costs and diversifying ownership in the wholesale market
- buying groups forming to provide scale that may encourage new generation or the increased utilisation of existing generation.

These measures are not straightforward in design or implementation. The ACCC will be undertaking further work to identify policies to assist these measures. In addition, the ACCC will be exploring other issues, such as:

- the incentive that existing generators have to invest, given the current high wholesale prices for existing generation and likely high profits
- barriers to entry for new generation operators
- whether current market incentives are appropriately signalling the type and location of new generation
- whether rule changes would assist in mitigating the lack of competition in the wholesale market or help facilitate new entry
- the role that market structure plays, including how large, often vertically integrated, incumbents had significant customer bases at or around the time of markets being opened to competition and have largely retained their market shares
- how the proliferation and accelerating rollout of large scale renewables is affecting market dynamics, including:
  - whether incumbents are advantaged by the transition to more renewables, for example by locking up new capacity with favourable PPA and LGC arrangements; or
  - whether renewables are emerging as an important source of diversification and fragmentation of existing market power
- whether there are barriers to investment in capacity to serve the C&I sector and how any such barriers can be overcome
- what can be done to improve incentives for demand management, in addition to the work that the AER and other agencies are currently undertaking
- the drivers of what appear to be very high (and growing) retailer costs and margins and, in particular, the drivers of these costs and margins in regions where competition is more mature. Is this a function of the costs associated with acquiring and retaining customers and the role that retailers' pricing practices play? How can such high EBITDA margins continue to be earned in a competitive market?

In considering these issues, the ACCC will be mindful of the history of interventions in this market which have too often had unintended consequences to the detriment of electricity users. For this reason, policies targeting improvements in this market will need to be carefully considered prior to implementation.

5.2. Lowering network costs

To a significant extent, past decisions relating to network investment are 'locked-in' and will burden electricity users for decades to come. We must therefore focus on what can be done to mitigate these effects, recognising that there are already signs that network prices are moderating, due to the recent efforts of the AER.

The Australian Government is currently taking steps to remove limited merits review.[376] The ACCC welcomes this move. Reviews sought by network operators have added billions of dollars to the cost borne by electricity users. The ACCC considers that the removal of this avenue of appeal of the AER's decisions will help ensure network pricing is moderated in future.

We should examine ways to reduce the existing network costs embedded in the system. For example, the Finkel Review found that consideration should be given to writing down asset values, either voluntarily or compulsorily, where appropriate.[377] Such a write-down may be appropriate where it can be determined that over-investment has occurred or where assets become stranded.

The nature of electricity networks is changing. Solar PV, smart meters, batteries, and other devices are increasingly able to help consumers strategically control their electricity usage, and feed into a more distributed market model. However, this presents policy challenges as well as opportunities.

Part of the solution is likely to be moving towards the use of smart meters and cost reflective pricing. The opt-in nature of cost reflective tariffs may be a barrier to broader take-up. The ACCC will give further consideration to this issue. It is also critical that tariffs are designed in a way that will demonstrate clear benefit to consumers and provide incentives for retailers to use them. The ACCC will be exploring these issues in more detail.

The ACCC also has questions about the future of network regulation in this rapidly changing environment:

- Given the lessons of the past, how can we ensure that future reliability and security measures do not come at excessive cost?
- What role do networks have in contributing to the reliability of the grid? In particular, what can be done to ensure that storage or other demand management options are available? How would this sit with existing regulation and ring-fencing obligations, and how might regulation need to change?

These issues and questions will be explored by the ACCC in the lead-up to the June 2018 report.

5.3. Ensuring cost effective and equitable environmental schemes

Some lessons from the past should instruct our approach to the design of future environmental schemes. While recognising the importance of environmental policy objectives, the ACCC is concerned that too little regard has been given to the affordability and distributional impacts of certain policies. The best example of this is premium feed-in tariffs which were costly and distortive in that some electricity customers benefited, while others were burdened. Moves have already been made to phase out premium feed-in tariffs, although many customers will remain on these for years to come, perpetuating the costs in the system.

Future schemes that will impose costs on electricity customers should be rigorously and transparently analysed. In particular, policymakers must ensure that the costs created by environmental schemes are not disproportionate to the benefit they seek to achieve and

[376] On 7 September 2017, the Competition and Consumer Amendment (Abolition of Limited Merits Review) Bill 2017 was referred to the Senate Environment and Communications Legislation Committee, which is due to report on 16 October 2017.

[377] Dr Alan Finkel AO, June 2017, p. 136.

cross-subsidies should be avoided, particularly where they disproportionately affect those least able to pay. Further, second order effects, such as those affecting network and wholesale markets, should be considered in any design.

In addition, there are things governments could do now to ease the pressure on electricity customers.

A good example of this is the move by the Queensland government to meet the costs of the solar bonus scheme.[378] Such a move takes pressure off prices immediately, and may be preferable to the previous approach of distributing the cost across all electricity consumers (even those who do not directly benefit from lower bills). Of course, the budget measure is not costless with taxpayers ultimately bearing this financial burden, but the transparency this provides could assist future policy design.

Further consideration should be given to policies that governments can make to achieve both environmental and affordability objectives together. Vulnerable consumers living in some types of housing face disadvantage in electricity bills through both the burden of environmental scheme costs, and the inability (due to cost and practicality) to invest in technology such as solar PV and batteries which would ease cost pressures. As such, there may be things governments can do to target assistance to certain types of consumers in certain types of housing.

5.4. Improving outcomes for small customers

It is clear that there are significant issues with the operation of the retail electricity market. The impact of these issues on consumers has been exacerbated by the price increases over the past decade. The ACCC has heard many examples of the difficulties that consumers and small businesses face in engaging with the retail electricity market and the particular difficulties faced by vulnerable consumers. Consumers and businesses are faced with a multitude of complex offers that cannot be compared easily. Additionally, there is low awareness of the tools available to help consumers make informed choices about electricity services and to seek assistance if they are struggling to pay their electricity bills.

Many of these issues arise from unnecessarily complex and confusing behaviour by electricity retailers. In some cases, this appears to be designed to circumvent existing regulation. The ACCC also identified issues that appear to be unintended consequences of existing regulation.

Eight retailers have recently made commitments to the Prime Minister to improve consumers' experience with the retail electricity market. In particular, these retailers have undertaken to contact consumers on expired discounts or standing offers to advise how much they can save on a better deal, encourage them to look at the government-run price comparator websites and report on the number of consumers remaining on expired discounts. These retailers also committed to work with the AER to develop simpler fact sheets with comparison rates and take steps to ensure that hardship consumers will not lose any discount for late payment.[379] The ACCC will monitor the implementation of each of these commitments closely and consider the success of each initiative. If successful, the ACCC is open to recommending that these commitments be extended more broadly and potentially incorporated into the NERL.

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378 Queensland Treasurer and Minister for Trade and Investment and Queensland Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply, Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply, *Palaszczuk Government intervenes to continue electricity price stability*.

379 Prime Minister, Treasurer, Minister for the Environment and Energy, *A better deal for Australian families*; Prime Minister, Minister for the Environment and Energy, *Remarks at energy retailers meeting*.

Throughout the remainder of the Inquiry the ACCC will:

- consider how to best ensure that consumers have sufficient information, in a format that they are able to use and understand, about how to manage electricity consumption and make informed decisions about their electricity services and consumption of electricity
- consider the lack of awareness among consumers of:
  - price comparator tools available to assist them in making a choice about electricity services
  - the options to assist in managing financial hardship, including retailer hardship policies and government concession schemes
- determine what can be done to reduce complexity in the retail electricity market. In particular, the ACCC will consider whether regulatory intervention is required to ensure that advertised discounts are taken from a consistent base rate and/or whether a regulatory limitation on pay on time discounts is necessary to ensure that consumers are not paying higher prices due to the conditionality of offers. We will also consider whether the AER requires additional powers to collect and publish pricing data to improve transparency and clarity over retail prices
- explore actions to improve vulnerable consumers' access to appropriate products and services in the retail electricity market
- closely monitor work arising from the Productivity Commission's report on data availability and use, and the Australian government's response to this report. The ACCC will focus on the work undertaken by the data taskforce, Energy Consumers Australia and AEMO to ensure that consumers have access to electricity consumption data in a format that they are able to understand and use, or outsource to third parties that are able to access and use that data on their behalf
- consider how to best encourage the introduction of switching services, which can take advantage of increased access to data, with appropriate protections to ensure that consumers are not switched without giving their approval to the switching provider
- consider whether the current energy retail laws are fit for purpose, or whether a shift to a principles-based regulatory framework, such as the framework that the United Kingdom is moving towards, would better serve the long term interests of consumers. A key consideration for the ACCC will be whether any regulatory amendments could result in unintended consequences, as has been the case with many energy-specific regulations.

While the ACCC will examine options for reforms during the remainder of the Inquiry, the ACCC can at this time highlight three areas where we consider action should be taken immediately:

- improvements should be made to the AER's ability to effectively investigate possible breaches of existing regulation. The AER should be provided with the power to require individuals to appear before it and give evidence when investigating possible breaches. Governments should also consider whether the infringement notice penalties and civil pecuniary penalties for breaches of the NEL and NERL operate effectively and are sufficient to deter market participants from breaching existing regulations
- the Australian Government should provide additional resourcing to improve and promote the AER's Energy Made Easy price comparison website as a tool to assist consumers in comparing energy offers. Consideration should also be given to

improving and promoting the Victorian Government's price comparison website, Victorian Energy Compare

- state and territory governments should review concessions policy to ensure that consumers are aware of their entitlements to concessions, that concessions are well targeted and structured to benefit those most in need and, where appropriate, that there is consistency between policies.

6. Making a submission

The ACCC invites written submissions in response to this Preliminary Report. Submissions are due by 17 November 2017. The ACCC would also welcome telephone conversations and meetings where possible. The ACCC will also directly contact some market participants to request specific information.

Throughout the Inquiry, the ACCC has the legal power to compel certain information from industry participants where required.

The ACCC may hold formal hearings where invited parties provide sworn evidence to the ACCC.

6.1. ACCC contacts

To make a submission or ask a question about the Inquiry you can email the Inquiry team at retailelectricityinquiry@accc.gov.au. If you would like to provide information over the phone, please contact:

Saraj Bhullar
saraj.bhullar@accc.gov.au
03 9290 1941

Rebecca Holland
rebecca.holland@accc.gov.au
03 9658 6467

6.2. Treatment of information

The Inquiry is a public process and written feedback will generally be posted on the ACCC website.

The CCA allows interested parties that provide written feedback to the Inquiry to make claims for confidentiality in certain circumstances.

The ACCC can accept a claim of confidentiality from the party if the disclosure of information would damage their competitive position. If the ACCC is satisfied that the confidentiality claim is justified, it must keep that information confidential unless it considers that disclosure of the information is necessary in the public interest.

If the ACCC considers that the confidentiality claim cannot be upheld, the ACCC will provide the parties with an opportunity to withdraw part or all of their feedback. If this information is withdrawn then the ACCC will not take it into account. If a party elects not to withdraw the information then the ACCC may disclose the information publicly. If the ACCC subsequently considers that disclosure of the information that has initially been treated as confidential may be necessary in the public interest, the ACCC will consult with the party providing the information before any such disclosure is made.

The ACCC invites interested parties, where appropriate, to discuss confidentiality issues further with the ACCC in advance of providing written feedback.

Any information that parties would like to claim confidentiality over should be provided in a separate document and should be clearly marked as “confidential” on every page. Reasons must be provided in support of the claim for confidentiality, so that the ACCC can properly consider whether the claim is justified.

Appendix 1: Terms of reference

COMMONWEALTH OF AUSTRALIA

COMPETITION AND CONSUMER ACT 2010

INQUIRY INTO RETAIL ELECTRICITY SUPPLY

I, Scott Morrison, Treasurer, pursuant to subsection 95H(1) of the *Competition and Consumer Act 2010*, hereby require the Australian Competition and Consumer Commission to hold an inquiry into the retail supply of electricity in the National Electricity Market (NEM).

This is an inquiry into the competitiveness of retail electricity markets within the NEM. While the focus of the inquiry is on retail markets, the operation and competitiveness of the wholesale electricity market significantly affects retail market outcomes and needs to be considered in this context.

Matters to be considered by the inquiry shall include, but not be restricted to:

i. the key cost components of electricity retail pricing in the NEM and how they have changed over time;

ii. the existence and extent of any barriers to entry, expansion and/or exit in retail electricity markets;

iii. the extent and impact of vertical integration in the NEM;

iv. the existence of, or potential for, anti-competitive behaviour by market participants and the impact of such behaviour on electricity consumers;

v. any impediments to consumer choice, including transaction costs, a lack of transparent information, or other factors;

vi. the impact of diverse customer segments, and different levels of consumer behaviour, on electricity retailer behaviour and practices;

vii. identifying any regulatory issues, or market participant behaviour or practices that may not be supporting the development of competitive retail markets;

viii. the profitability of electricity retailers through time, and the extent to which profits are, or are expected to be, commensurate with risk; and

ix. all wholesale market price, cost and conduct issues relevant to this inquiry.

This is not to be an inquiry into supply by any particular person or persons, or by a State or Territory Authority.

The inquiry is to commence today and submit to me a preliminary report within 6 months and a final report by 30 June 2018.

DATED THIS 27TH DAY OF March 2017

SCOTT MORRISON
Treasurer

Appendix 2: Public submissions to the Inquiry

ACT Energy Consumers Policy Consortium

AGL

AGL (Frontier report)

AGL (supplementary submission)

AGL (supplementary submission - NSW coal supply)

Agricultural Industries Energy Task Force

Agricultural Industries Energy Task Force (Attachment)

Alan Hughes

Alba Cheese Manufacturing Pty Ltd

Alinta Energy

AMES Australia

Amleto Conticello

Andrew Chapman

Andrew McDonald

Andrew Strachan

Anon

Anon 2

Appollo Yianni

Arie de Gruiter

Australian Chamber of Commerce and Industry

Australian Dental Industry Association

Australian Energy Council

Brenda Montgomery

Brian Blinco

Bruce Wheatley

Business SA

Business SA (attachment)

Chalet Swisse Spa

Chamber of Commerce and Industry Queensland

Charmaine Shakespeare

Chris Bigham

Chris Orwin

CitySmart

Chris Pike

Combined Pensioners & Superannuants Association of NSW

Communications Experts Group

Comfy Homes

Consumer Action Law Centre

David De Santis

Darryl Varcoe

Dean Aughterson

Denise Burke

Dennis Watson

Don Willis

Donna Johnson

Donna Rowe Burra

Eclectic Engineering

Edward Drewry

Energy Consumers Australia

Energy Consumers Australia (Appendix)

Energy Locals

Energy & Water Ombudsman NSW

Energy and Water Ombudsman Victoria

Energy Networks Australia

EnergyAustralia

Energy Queensland

Enova Energy

Eric E Mills

Essential Services Commission Victoria

Faith McCallum

Filomena Pensabene

Filomena Pensabene (supplementary submission)

Frank Wu

Dr Gaye Rosen

Geoff Dunsford

Glenese Palmer

Graeme Smyth

Harald Ehmann

Hannah O'Connor

Independent Pricing and Regulatory Tribunal

James Goldsmith

Jenny Thompson

Jess Smith

John Broadbent

John Crane

John Roberts

Karen Crowe

Kerry Kneller

Kevin Scrimshaw

Large Format Retail Association

Liz Barrow

Mach 1 Panels

Major Energy Users

Mal Whitehouse

Margaret Chaffey

Dr Martin Gill

Martin Vizjak

Michael Ferrinda

Michael Johnson

Miriwinni Lime

Mojo Power

Momentum Energy

National Seniors Australia

Neville Grant

Neville Schot

Nicholas Harris

Nick

Noel Doherty

NSW Business Chamber

NSW Farmers' Association

NSW Small Business Commissioner

Origin Energy

Origin Energy (Attachment)

Palm Beach Neighbourhood Centre

Pankaj Bharadia

P Harvey

P Harvey (supplementary submission)

Paul G Barker

Peter Fraser

Peter Hansen

Peter Harris and Ray Butler

Phillip Hodges

Philip Kennedy

Philip Kennedy (supplementary submission 1)

Philip Kennedy (supplementary submission 2)

Printing Industries Association of Australia

Public Interest Advocacy Centre

Queensland Consumers Association

Rex Agacy

Rio Tinto

Robert Shepherd

Rob Fuller

Roimata Kahui Kahui

Sales Assured Limited

Ros Loveday

SA Power Networks

Rosemary Jackson

Rudy Ramasamy

Scott Emerson, MP

Sharon Klein

Shane Malden

Shauna-Marie Wilson

Stanfield Automatics

Sumo Power

Shopping Centre Council of Australia

South Australian Wine Industry Association

South East Community Forum

Tasmanian Council of Social Service

Tasmanian Small Business Council

Tasmanian Small Business Council (Attachment 1)

Tasmanian Small Business Council (Attachment 2)

Tasmanian Small Business Council (Attachment 3)

Tasmanian Small Business Council (Attachment 4)

Tasmanian Small Business Council (Attachment 5)

Taya Nielsen

The Australia Institute

The Australia Institute (attachment)

Tomago Aluminium Company

Trudy Hollinshead

Valentine Hydrotherapy Pools Inc

Victorian Council of Social Service

Victorian Electricity Distribution Networks

Warren Pratten

Warren Pratten (further submission)

Work for the Soul

Appendix 3: Summary of issues raised at public forums

In July and August 2017, the ACCC held public forums in Adelaide, Brisbane, Melbourne, Sydney, and Townsville. A large user forum was held in Adelaide. Approximately 250 interested parties attended the six forums.

A number of issues were raised at the forums, relating to all aspects of the electricity supply chain. A number of consumers, businesses and representative organisations also told stories about the difficulties that they or their members are facing as a result of rising electricity costs.

The issues raised by attendees at the forums are summarised below. These are not the ACCC's views.

Increasing electricity prices

- Increased bills are a major source of concern for both residential and business customers.
- Each component of the electricity bill is increasing. The price increases are causing energy affordability issues for more consumers than ever before.
- Customers are doing all they can do reduce their bills but this has a limited effect, particularly given that fixed charges have increased significantly.
- Businesses are facing significant electricity price increases. The increased costs threaten future investment and viability.

Environmental schemes

- The RET has driven up driven prices, while confusion around other climate change policy has created uncertainty for retailers and consumers.
- There needs to be more transparency around what contributes to feed-in tariffs, and the discrepancy between feed-in tariffs and the retail price.
- The reduction of feed-in tariffs has reduced the benefit of installing solar PV systems.

Network costs

- There is a lack of transparency around network costs and the regulatory regime may not be suitable.
- While network tariffs drove price increases a number of years ago, network prices have stabilised or decreased in recent years but retail prices do not reflect this.
- Demand tariffs have led to increased costs. The method for calculating peak demand may not reflect consumption patterns.

Wholesale energy market

- Significant concerns were raised about the high price of wholesale energy and the lack of suitable baseload generation.
- The closure of the Hazelwood power station in Victoria has contributed to recent price increases, but there are other causes for price increases over the past ten years.

Competition in the retail electricity market

- Questions were raised regarding the competitiveness of the retail electricity market and whether the benefits of competition are being passed on to consumers.
- The electricity market and regulatory systems are structured in a way that means that consumers can only access the benefits of competition if they are able to engage and effectively interact with the market. Not all consumers are in this position.
- Households have a number of electricity offers available to them, however large users and regional users often have less choice.

Privatisation

- Queries were raised about whether competition is able to serve consumers when it comes to an essential service. When electricity retailers were operated by state governments and fully vertically integrated, there were not price rises like there have been in recent years.

Transparency around offers and bills

- Consumers struggle to understand their electricity consumption and compare offers, more needs to be done to assist consumers to do this.
- A single price comparison rate would be beneficial for consumers when they are comparing retailers and offers.
- It is hard for some consumers and businesses to read and understand their bills. Improvements could be made to the format of bills to make it easier for consumers to identify key information. Retailers should be required to present bills in a consistent manner.
- Consumers find it difficult to resolve issues with retailers, and are sometimes reluctant to contact them when they have an issue. It is also difficult to resolve an issue or obtain information from retailers when you do contact them. Some consumers are unsure where to get help.

Price comparison websites and other related services

- The government-run price comparison websites, the AER's Energy Made Easy website and the Victorian Government's Victorian Energy Compare website work well but some degree of knowledge is required to use them. Governments should make improvements to the price comparison websites to make comparisons quicker and easier.
- The website should provide users with options for more detailed comparisons, if they want these. Some consumers prefer less information. User estimates should include solar generation and allow users to add metering data.
- Commercial price comparison websites may appear to be user friendly but it is not clear whether they are affiliated with an electricity retailer, they display all available offers and/or they receive commissions if a consumer decides to switch after viewing the website.
- Energy brokers that provide advice and identify offers for businesses can be useful, however there is often a lack of transparency over the commissions that the brokers receive from electricity retailers.

Vulnerable consumers

- Customers do not know where to go to get help with affordability issues.
- Low-income customers and tenants are limited in what they can do to reduce consumption.
- There needs to be a review of support and protections for vulnerable customers. Including concession schemes and assistance provided by retailers.

Appendix 4: ACCC actions in the electricity market

The ACCC has acted in the electricity market in a number of different ways in recent years reflecting its focus on ensuring consumer protection and fostering competitive, fair markets.

Enforcement Action

The energy market (including electricity) was an enforcement priority area for the ACCC from 2012 to 2014 with a focus on conduct concerning door-to-door selling and telemarketing, savings representations (also known as "discounts off what?") and conduct by commercial comparator websites.

A selection of the ACCC's work under the ACL is detailed below.[380] Further information about these matters and the role of the ACCC can be found on the ACCC's website at www.accc.gov.au.

Discount claims	
Lumo Energy	In June 2017, Lumo paid a penalty of $10,800 after being issued with an infringement notice by the ACCC.[381] The ACCC issued the infringement notice because it had reasonable grounds to believe that Lumo had contravened the ACL by making a false or misleading representation about energy discounts. The ACCC's investigation arose after Lumo made a representation on its website in February 2017 that consumers, including those outside of Victoria, could save 33 per cent off their total electricity bill and 17 per cent off their total gas bill if they switched to Lumo. In fact, these discounts were only available to residents of Victoria with maximum discounts for electricity substantially less in other states. Lumo does not offer gas outside Victoria.
AGL SA *Australian Competition and Consumer Commission v AGL South Australia Pty Ltd* [2014] FCA 1369 *Australian Competition and Consumer Commission v AGLSouth Australia Pty Ltd* [2015] FCA 399	In April 2015, AGL South Australia Pty Ltd (AGL SA) was ordered to pay penalties of $700,000 and to offer refunds totalling approximately $780,000 to 23,000 consumers after the Federal Court found that AGL SA made false or misleading representations concerning the level of discount that residential consumers would receive under AGL's South Australian energy plans. Between January and mid-July 2012, consumers who telephoned AGL SA and commenced a discounted energy plan would have understood that they would receive a discount off rates that generally applied to other residential customers like themselves. Although these consumers initially received the represented discount, in mid-2012 AGL SA increased the rates under its energy plans. In a letter sent to these consumers advising them of their new rates, AGL SA stated they would continue to receive their discount, when that was not the case. This was because, following the rate increase, their rates before the discount was applied were higher than the rates for those consumers who were supplied under AGL SA's standard retail contract or those consumers who had subsequently commenced an energy plan with AGL SA.

380 Schedule 2 of the CCA contains the ACL. The ACL contains provisions dealing with misleading or deceptive conduct, unconscionable conduct, unfair practices, conditions and warranties, product safety and information, liability of manufacturers for goods with safety defects offences, country of origin representations.

381 Infringement Notices were introduced in 2010 as part of the ACL amendments. The ACCC may issue an infringement notice where it has reasonable grounds to believe that a person has contravened certain consumer protection provisions. Information about infringement notices can be found at the ACCC's website.

Origin Energy *Australian Competition and Consumer Commission v Origin Energy Limited* [2015] FCA 55	In February 2015, Origin and two of its subsidiaries were ordered, by consent, to pay penalties of $325,000 after the Federal Court found that they had made false or misleading representations about the level of discount residential consumers in South Australia would receive under a DailySaver energy plan. In early to mid-2013, representations were made on the Origin website, and in confirmation packs sent to consumers that under a DailySaver energy plan, that consumers would receive a discount of up to 16% off Origin's energy usage charges (for electricity) and up to 12% off Origin's energy usage charges (for natural gas). The Federal Court held that the representations were false or misleading because the rates used to calculate usage charges under a DailySaver energy plan, to which the discount would then be applied, were *higher* than the rates under the subsidiaries standard retail contracts. As a result, consumers who entered into a DailySaver energy plan in early to mid-2013 effectively received a reduced discount.
Energy retailers	In 2013, the ACCC wrote to energy retailers expressing concerns about the way many energy plans were being promoted, particularly in the promotion of discounts and savings off energy use and/or supply charges. The ACCC was concerned that consumers may be misled about savings that they would make by switching to the discounted plans. The ACCC was also concerned that the average consumer found it difficult to compare plans given their complexity.
Door-to-door sales	
Origin Energy *Australian Competition & Consumer Commission v OriginEnergy Electricity Limited* [2015] FCA 278	In March 2015, the Federal Court ordered Origin Energy Electricity Limited (Origin) to pay $2 million in penalties for unconscionable conduct, undue harassment or coercion, false or misleading representations and breaches of the unsolicited consumer agreement provisions of the ACL. The court also ordered Origin's marketing company, SalesForce Australia Pty Ltd, to pay $325,000 in penalties. The false or misleading representations made to consumers by the sales representatives on behalf of Origin Energy, included that: • there was a mistake on the consumer's electricity bill issued by their current electricity supplier; • the consumer had to change to Origin because of changes implemented by the government; • the consumer would not be charged an exit fee if they changed their electricity supplier to Origin; • the sales representative was part of a government-commissioned study investigating complaints about the cost of energy; and • the consumer was signing an expression of interest and would not change her electricity retailer unless she contacted Origin. With regard to unconscionable conduct, in one instance, the sales representative continued to negotiate with the consumer, a native Tamil speaker, after being advised the consumer had difficulty understanding English. In a second instance, the sales representative continued to negotiate with a consumer after she informed him that she was not the authorised account holder, and repeatedly advised that she was not interested in changing her electricity retailer. This

	conduct was also held to constitute undue harassment or coercion.
Energy Australia *Australian Competition and Consumer Commission v EnergyAustralia Pty Ltd* [2015] FCA 274	In March 2015, the Federal Court, by consent, ordered EnergyAustralia Pty Ltd to pay penalties of $1 million and its former telemarketing company, Bright Choice Australia Pty Ltd, was ordered to pay penalties of $100,000 for contravening the ACL. EnergyAustralia and Bright Choice had made false or misleading representations and engaged in misleading or deceptive conduct when dealing with certain consumers to sell energy plans. Between August 2012 and April 2013, during telephone calls with consumers in Victoria, NSW, and Queensland, Bright Choice representatives told consumers they were not being signed up to an energy agreement, that they would be sent information and could then decide whether or not to sign up to an agreement, and that Energy Australia and Bright Choice would not treat the consumer as if they had agreed to enter an energy plan (unless there had been further communication with the consumer). In fact, those consumers were recorded by Bright Choice as having agreed to enter into a contract and EnergyAustralia then sent each of them a “Welcome Pack” containing contractual documents and treated each consumer as having agreed to switch energy services to a new EnergyAustralia plan.
Simply Energy	In February 2015, IPower Pty Ltd, trading as Simply Energy (in partnership with IPower 2 Pty Ltd) paid $20,400 after the ACCC issued two infringement notices for alleged misleading door-to-door sales conduct. The ACCC issued the infringement notices because it had reasonable grounds to believe that Simply Energy’s sales representatives told consumers that there was an ‘urgent problem’ or ‘something wrong’ with their existing electricity supply, when this was not the case. The ACCC also believed that IPower had made false or misleading representations about the standard or quality of goods during door-to-door sales conduct.
Energy Australia *Australian Competition and Consumer Commission v EnergyAustralia Pty Ltd* [2014] FCA 336	In April 2014, the Federal Court ordered, by consent, that EnergyAustralia Pty Ltd (formerly TRUenergy), and three of its associated marketing companies to pay a total of $1.49 million for unlawful door-to-door selling. EnergyAustralia, through the conduct of certain sales representatives acting on its behalf, made false and misleading claims and engaged in misleading and deceptive conduct while calling on consumers at their homes to negotiate agreements for the supply of retail electricity. EnergyAustralia, by conduct of the sales representatives, also breached various unsolicited consumer agreements provisions of the ACL. The false and misleading representations made to consumers by the sales representatives acting on behalf of EnergyAustralia included that: • there was a mandated electricity rate or tariff that consumers were required to be charged, and that the consumer’s current retailer was charging at higher than this mandated electricity rate or tariff; • the sales representative and EnergyAustralia’s rate or tariff had approval from, or sponsorship or affiliation with, the government; • the sales representative was attending the consumer’s

	premises for the purpose of a government initiative to make sure energy companies were charging the correct rate or tariff; • the consumer would become eligible for additional government entitlements that would reduce their electricity bills if the customer changed from their current retail electricity supplier to EnergyAustralia.
AGL South Australia *Australian Competition and Consumer Commission v AGLSales Pty Ltd* [2013] FCA 1030 *Australian Competition and Consumer Commission v AGLSales Pty Ltd (No 2)* [2013] FCA 1360	In December 2013, the Federal Court ordered, by consent, that AGL South Australia Pty Ltd and its marketing company, CPM Australia Pty Ltd, pay $60,000 for failing to leave a consumer's premises despite the 'do not knock' sign on their front door. As part of the same proceedings, in May 2013 the Court ordered, by consent, that AGL Sales Pty Ltd and AGL South Australia pay combined pecuniary penalties of $1.55 million for other unlawful selling practices. CPM was also ordered to pay $200,000 for its role in the conduct. A salesperson engaged by CPM to sell energy on behalf of AGL Sales in Victoria, made false representations and engaged in misleading and deceptive conduct during uninvited calls on consumers. This included conduct that was clearly designed to mislead consumers about the salesperson's reason for calling, such as representing that he was not there to sell anything. The salesperson also made a number of false or misleading statements about the price of AGL's products and consumers being overcharged by their current supplier. A second salesperson in South Australia also engaged in misleading and deceptive conduct. The salespeople also breached the ACL because they did not clearly advise consumers that the salesperson's purpose in calling on the consumer was to seek the consumer's agreement for the supply of electricity and gas or that they would be obliged to leave immediately upon request.
Australian Power & Gas *Australian Competition & Consumer Commission v Australian Power and Gas Company Limited* [2013] FCA 1358	In November 2013, the Federal Court ordered, by consent, that Australian Power & Gas Company Ltd (APG) pay $1.1 million for illegal door-to-door selling practices and making false or misleading representations. The Federal Court also declared that APG, by the conduct of one of its contracted sales representatives, engaged in unconscionable conduct during a door-to-door sale involving a consumer from a non-English speaking background and with very limited English reading/writing skills.
Red Energy	In September 2013, Red Energy Pty Ltd paid four infringement notices totalling $26,400 and provided the ACCC with a court enforceable undertaking in relation to alleged misrepresentations by one of its telemarketers. In the undertaking, Red Energy admitted that a telemarketer employed by it to sell retail energy made false claims and engaged in misleading and deceptive conduct during unsolicited calls to consumers. This included conduct that was designed to mislead consumers about the salesperson's reason for calling, such as claiming he was calling about the consumer's current energy bill with another energy retailer, was affiliated with the consumer's current energy retailer and was not calling to sell anything. Red Energy undertook to publish a corrective notice, provide a link to Energy Made Easy on its homepage for no less than 180 days, provide a remedy for affected consumers and review its compliance program.

Lumo Energy	In July 2013, the ACCC accepted a court enforceable undertaking from Lumo Energy Australia Pty Ltd about its door-to-door sales agents. The ACCC considered that Lumo Energy breached the ACL at least four times in Victoria during 2012 as its sales agents did not clearly advise consumers about the purpose of the call, indicate that they were obliged to leave the premises immediately on request, and give their own name or Lumo Energy's name and address. Lumo Energy undertook to comply with the relevant provisions of the ACL.
Energy comparators	
Energy Watch *Australian Competition and Consumer Commission v Energy Watch Pty Ltd* [2012] FCA 425 *Australian Competition and Consumer Commission v ACN 135 183 372 (in liquidation) (formerly known as Energy Watch Pty Ltd)* [2012] FCA 749	In July 2012, the Federal Court ordered penalties totalling $2.015 million, declarations and costs for misleading advertising relating to representations about the nature of the company's service and the savings consumers would make by switching energy retailers through the company's service.
Reviews	In 2013, the ACCC conducted reviews and monitoring of commercial energy comparator websites and, as a result, wrote to a number of operators about conduct of concern on those sites. This included inadequate disclosure of commissions, misleading conduct concerning how many offers were compared, and inadequate explanation of the terms and conditions which applied to the offers. In 2013–14, the ACCC worked with industry to improve standards for comparator websites. Following contact by the ACCC, eight companies in the energy sector removed statements from their websites which we considered likely to mislead consumers about the nature and extent of their energy price comparison service and the savings consumers could achieve by using it.
Report	In November 2014, the ACCC published its report *The comparator website industry in Australia*. The report provided clear guidance on what information was relevant and important to disclose to enable users of the sites to make properly informed decisions. The report is available on the ACCC website.
Guidance	In August 2015 the ACCC released guidance for comparator website operators and suppliers. The guidance was designed to assist operators and suppliers when making decisions about comparator services, including in advertising and marketing. It is intended that this guidance encourage an industry-wide consideration of business practices that promote fair trading and better consumer experiences in this growing sector. The ACCC also released consumer guidance including tips on how to get the best outcomes when using comparator websites. Both of these guidelines are available on the ACCC website.

Other claims	
Momentum Energy	In 2016 Momentum paid a penalty of $54,000 following the issue of five infringement notices. The ACCC was concerned that an advertising campaign represented that Momentum Energy generated and supplied renewable energy when this was not the case. The ACCC issued the infringement notices as it had reasonable grounds to believe that Momentum had contravened the ACL by engaging in conduct liable to mislead the public as to the nature, manufacturing process and/or characteristics of its electricity products.

Authorisations and Notifications

The CCA allows businesses to obtain protection from legal action in certain circumstances for conduct that might otherwise raise concerns under the competition provisions of the CCA. Broadly, the ACCC may grant an authorisation when it is satisfied that the public benefit resulting from the conduct outweighs any public detriment. Notification is an alternative process to authorisation where parties that propose to engage in certain conduct may seek protection from legal action under the CCA, if the conduct is in the public interest.

The ACCC has considered a number of applications for authorisations in the electricity market. Of particular interest are some recent decisions concerning businesses forming joint purchasing groups for electricity. These include:

South Australian Chamber of Mines and Energy	On 17 May 2017 the ACCC gave authorisation to the South Australian Chamber of Mines and Energy, along with 27 other South Australian businesses, to establish a joint electricity purchasing group for 11 years.[382] As a result of the authorisation, the group will be able to seek reliable electricity supply arrangements for its members at competitive prices. The ACCC considered that the joint tender could bring the benefits of increased competition in the wholesale market by encouraging efficient use of generation plants and encouraging market entrants in the wholesale market. It would also result in a reduction in transaction costs. It was considered that the arrangement would bring little public detriment as the group's total load accounts for less than one per cent of the National Electricity Market.
Melbourne City Council	On 21 July 2017 authorisation was given to Melbourne City Council and 13 other entities, including three other local councils, two tertiary education institutions and two banks to jointly negotiate the terms and conditions of certain electricity sale agreements and to conduct a collective tender process, known as the Melbourne Renewable Energy Project.[383] The joint electricity purchasing group will be able to pool their electricity demand and place a single tender into the market for an electricity supply agreement. The group's objective is to jointly secure the construction of a new renewable-energy generation system, and to promote investment in renewable energy. This system would be

[382] Authorisation was sought as the proposed conduct may contain a cartel provision or may have the purpose or effect of substantially lessening competition or be an exclusionary provision within the meaning of section 45 of the CCA. https://www.accc.gov.au/media-release/accc-allows-sa-businesses-to-jointly-purchase-electricity

[383] For further information see the ACCC's website at http://registers.accc.gov.au/content/index.phtml/itemId/1194790/fromItemId/401858

	connected to the National Electricity Market and must be capable of supplying a quantity of carbon neutral electricity into the NEM that is equivalent to the quantity purchased by the applicants. The ACCC considered that by pooling demand the arrangement would generate efficiencies and enable the scale necessary to incentivise new investment in renewable energy. There would also be transaction cost savings made from the arrangement. The final determination granted authorisation to the applicants for 15 years.
Eastern Energy Buyers Group	On 4 August 2017 the Eastern Energy Buyers Group, on behalf of its current and future members, applied for authorisation for a period of 11 years to establish a joint energy purchasing group.[384] Members of the group wish to pool their collective demand for electricity and gas and place one or more tenders into the market calling for proposals to meet their electricity and gas needs. A supplier would then enter an agreement with each applicant. These agreements would be on the same (or very similar terms). The group proposed to allow other businesses to enter the group provided that the joint consumption of the group did not exceed 20% of the Victorian gas market and 10% of the Victorian electricity market. The current members of the group operate in the agri-business sector, in food production and processing of agricultural commodities and each has significant operations in Victoria. On 1 September, the ACCC granted interim authorisation to enable the group to investigate potential electricity, gas and gas transport supply options, prepare tender documents, and issue one or more tenders. Interim authorisation does not extend to entering into any supply agreements for electricity, gas or gas transport services.

The ACCC has also considered and allowed a number of notifications in the retail electricity market.[385] These decisions have predominantly concerned retailers proposing to offer special plans for deals for electricity to consumers if those consumers also purchase goods or services from another party.

As one example, on 10 November 2016 Origin Energy Electricity Ltd lodged a notification with the ACCC concerning conduct where it would provide a discount to customers in NSW, VIC, ACT and SA for energy storage devices (batteries) and solar PV systems on condition that those customers also purchased energy management and performance optimisation services from Reposit Power Pty Ltd. In lodging the notification, Origin argued that there was a public benefit to the conduct in that it would enable customers to obtain discounts and to encourage other businesses to offer similar deals. It also considered that there was no anti-competitive effect. The ACCC allowed the notification to stand.[386]

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384 For further information see the ACCC's website at: http://registers.accc.gov.au/content/index.phtml/itemId/1203232/fromItemId/278039/

385 Businesses may obtain immunity for conduct that might risk breaching the exclusive dealing provisions of the CCA by lodging a notification with the ACCC. Exclusive dealing involves one business imposing restrictions on another business' freedom to choose with whom, in what or where they deal. Exclusive dealing is prohibited under the CCA in certain circumstances. The CCA prohibits a common form of exclusive dealing known as third line forcing. Third line forcing is the supply of goods or services on condition that the purchaser also acquires goods or services from a third party. For third line forcing, Immunity will commence 14 calendar days after the notification is validly lodged, provided the ACCC does not formally object through issuing a draft notice. For exclusive dealing notifications other than third line forcing, immunity will commence from the date the notification is validly lodged.

386 For further information see the ACCC's website at: http://registers.accc.gov.au/content/index.phtml/itemId/1199653/fromItemId/1191840.

Mergers and acquisitions

The ACCC also has a role in considering business mergers and acquisitions. Under the CCA mergers that would have the effect, or be likely to have the effect, of substantially lessening competition in a market are prohibited.[387] The ACCC assesses whether proposed mergers will, or are likely to, substantially lessen competition and can conduct both public or confidential reviews.

One key acquisition in the electricity market considered by the ACCC is outlined below.

AGL Energy Limited's proposed acquisition of Macquarie Generation	In early 2014, the ACCC considered the proposed acquisition of Macquarie Generation by AGL Energy Limited. The ACCC was concerned that the merger would result in a substantial lessening of competition in the NSW retail electricity market. Macquarie Generation, a state-owned corporation, was offered for sale as part of the broader privatisation of electricity generation assets by the NSW Government. The assets of Macquarie Generation included Bayswater and Liddell power stations which accounted for 27 per cent of NSW capacity. AGL already had a substantial presence as a retailer in NSW and the ACCC considered that the acquisition would result in the largest source of generation capacity in NSW being owned by one of the three largest retailers in NSW. In addition, it would mean that the three largest retailers in NSW would own a combined share of 70 to 80 per cent of electricity generation capacity or output. It was considered that this would raise barriers to entry and expansion for other retailers in NSW. The ACCC formed the view that the proposed acquisition would be likely to result in a significant reduction both in hedge market liquidity and the supply of competitively priced and appropriately customised hedge contracts to second tier retailers competing in NSW. The acquisition also would have competitive ramifications for the NEM as it would make AGL the largest generator in each of NSW, Victoria and South Australia.[388] As a result of the ACCC's decision to oppose the proposed acquisition, AGL made an application to the Australian Competition Tribunal seeking that it be allowed to proceed on public benefit grounds. The role of the ACCC was to ensure that the Tribunal had all the relevant information and evidence and to assist it to assess the competition and public benefit issues.[389] In its report to the Tribunal, the ACCC expressed the view that the proposed acquisition was likely to result in consumers ultimately paying more for electricity, receiving lower quality service and being offered less choice. In July 2014 the Tribunal granted conditional authorisation to AGL's proposed acquisition of Macquarie Generation, finding that the benefits to the public of the proposed acquisition outweighed any

387 Merger parties are not legally required to notify the ACCC of a merger and have the option of proceeding with the merger without seeking any regulatory consideration. However, this will not prevent the ACCC from subsequently investigating the merger, including making public inquiries to assist its investigation and, if necessary, taking legal action. For more information please consult the ACCC's website.

388 At this time a proposal by retailer ERM Power Limited to acquire the Macquarie Generation assets was not opposed by the ACCC as the ACCC considered that such an acquisition was not likely to substantially lessen competition in any relevant market. This was because ERM had only one other generator asset in the National Electricity Market and a modest retail position relative to the major vertically-integrated retailers.

389 In merger authorisation determinations, the Tribunal must apply a public benefit test under s. 95AZH of the CCA. This differs to reviews under s. 50 of the CCA where a substantial lessening of competition test is applied.

	detriment to competition. The Tribunal imposed conditions on its authorisation. The conditions place an obligation on AGL to offer not less than 500 MW of electricity hedge contracts to smaller retailers in NSW per year for a period of seven years. The Tribunal did not agree with the ACCC's position, finding that the proposed acquisition was unlikely to lead to any substantial detriment in NSW arising from a lessening of competition in the electricity retail or wholesale markets. The Tribunal also found that there were significant public benefits in allowing the state government to privatise the relevant assets and use the sale proceeds for public infrastructure spending.